MYRMECIA

News Bulletion of the Australian Entomological Society Inc.
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(Office bearers continued on rear cover).

THE COVER

The cover illustration for this year's *Myrmecia* features an illustration by Jenni Thurmer of the South Australian Museum of Katie's springtail, *Katianna australis* Womersley, a member of the globular springtail family Sminthuridae. This species, described from Tasmanian pastures in 1932, is common through southern Australia. Species of *Katianna* normally inhabit native grasses but a small number, including *K. australis* have been able to colonise exotic pastures.

NOTICE

Statements made in *Myrmecia* do not necessarily represent the views of the Australian Entomological Society. Items printed herein should not be reproduced without permission of the author of the material.

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CONTENTS

Editorial 1
Executive Quarterly Report 2
Annual Report 3
Treasurer's Report 5
Auditor's Reports 5
Chief Editor's Report 8
News Bulletin Editor's Report 8
Business Manager's Report 9
Conservation Committee Annual Report 9
Minutes of 3rd Annual General Meeting 10
Hobart Conference Scientific Programme 12
Regional News
- South Australia 19
- Northern Territory 19
- S.E. Queensland 21
- N. Queensland 22
- New South Wales (metropolitan) 23
- New South Wales (country) 25
- Victoria 25
- Australian Capital Territory 27
- Western Australia 30
- Tasmania 30

Overseas News
- Papua New Guinea 31
- New Zealand 31

News from Affiliated Societies
- Entomological Society of Queensland 32
- Entomological Society of N.S.W. 32

Conservation Committee News 32
Conference reports 32
Coming Events 35
New Publications 36
Market Place 37

Advertising Rates for Myrmecia

	Single Issue	4 Issues (One Year)
Full Page	$60	$180
Half Page	$35	$105
Quarter Page	$24	$72

These rates apply to camera-ready copy supplied by the advertiser. Where this is not supplied a small additional charge may be made for the layout.

In addition, loose inserts and pamphlets supplied by the advertiser will be included in a mailout for $50 per item. The items should be of a size which will not project beyond the pages of ***Myrmecia.***

Copy Deadline for Next Issue

Material for publication in the May 1992 issue of ***Myrmecia*** should be in the hands of the Editor at the address below by **Friday 24 April.** Fax transmission may be used to (02) 683 9714 but care should be taken to ensure legibility and hard copy should be posted simultaneously. Material may be submitted on floppy disk in any IBM-compatible word processor format.

Murray FLETCHER
News Bulletin Editor
Biological and Chemical Research Institute
PMB 10, RYDALMERE, NSW 2116

EDITORIAL

This is my first attempt to emulate the quality of production of ***Myrmecia*** achieved by my predecessor Geoff Monteith. I am sure you will forgive me if it takes an issue or two before the bulletin is (1) of equal quality and (2) on time! I have retained the services of All Clear Offset Printers, the same printer used by Geoff, since Dean Brown's experience with the publication makes production far more straightforward than it would have been with a new printer. For this issue at least, I have also retained Geoff's distribution system at the Queensland Museum and express my gratitude to Lynette Dikfos for agreeing to continue with this arduous task.

Straight into the controversy! A recent current affairs television item concerned funding for research into Lyme disease, a tick-borne spirochaete disorder of mammals.The story centred around a young scientist who was the first to find spirochaetes in ticks in Australia and link them to symptoms of the disease. Subsequent research led her to isolate and culture the spirochaetes from ticks, a valuable contribution to work on this disease in Australia. The report concentrated on the lack of funding she has subsequently received and the consequent difficulty she has experienced in following up this work.

The scene then transferred to Westmead Hospital where Richard Russell has funding for work on Lyme disease. The reporter gave Richard a hard time about his having funding while others had none. The reporter implied that Richard should not have received this funding when such valuable work was being undertaken without funding eslewhere.

The report, in my view, failed to make a number of salient points. Firstly, the funding process is a relatively lengthy one involving peer review. Richard pointed out that the process was well underway before the isolation of the spirochaetes had occurred. However, these changing circumstances did not impinge on Richard's proposed work since it is in a different, yet complementary, direction. Secondly, funding bodies assess the proposals placed before them using many factors. These include appropriateness of the project proposed, likelihood of success, comprehensiveness of the details provided in the proposal and the track record of the principal investigators. Lobbying by the interested parties may also have some influence. The relative merits of applications are not for individual recipients to judge. Thirdly, no information was provided on what Richard's team had achieved using the funding they had received - surely a vital area for investigation in such a report . Richard and his team were treated in a very negative manner.

It concerns me that lobbying for funds has now reached the stage when the media is prepared to tarnish the image of a valuable member of the scientific community in order to assist other workers to gain funding support.

Murray FLETCHER
Editor

Executive Quarterly Report

MEETINGS

The Executive met on 17 October, 19 November, 17 December, 1991 and 21 January, 1992.

NEW MEMBERS

We welcome the following new members:

Elected 17 October 1991

Ms J.K. WEBBER, PO Box 1173, Palmerston, NT 0831. Jennifer is a student with general interests in entomology.

Elected 19 November 1991

Mr C. FEUTRILL, B.Ag.Sc.(Hons), Yandilla Park Citrus, Chowilla Street, Renmark, SA 6341. Craig is a consultant entomologist with interests in integrated pest management.

Ms M.M. MILES, B.Ag.Sc.(Hons), 116 Jerang Street, Indooroopilly, Qld 4068. Melina is an MSc student and is interested in agricultural entomology.

Elected 17 December 1991

Mr R. BASHFORD, Cert. Agric., Forestry Commission, GPO Box 207B, Hobart, Tas 7001. Richard is interested in forest entomology, carabids, lucanids and pest management and monitoring techniques.

Dr J. COOK, B.A.(Hons) Zoology (Oxford), Ph.D. (London), Department of Genetics, La Trobe University, Bundoora, Vic 3083. James is interested in the evolution of reproductive patterns in insects, especially Hymenoptera.

Ms M. GRIFFITHS, B.Sc. Aust Env Studies, Department of Entomology, University of Queensland, St. Lucia, Qld 4072. Manon is a PhD student investigating aspects of the biology and ecology of the red cedar tip moth.

Mr A.J. JESSUP, NSW Agriculture, Gosford Horticultural Postharvest Laboratory, PO Box 355, Gosford, NSW 2250. Andrew is a Research Horticulturist with interests in fresh fruit disinfestation.

Mr M. MANNING, B.Sc.(Hons), 47 Brentwood Crescent, Frankston, Vic 3199. Matthew is a student interested in acarology and ecology.

Dr D.J. O'DOWD, Ph.D., Department of Ecology and Evolutionary Biology, Monash University, Clayton, Vic 3168. Dennis is interested in plant-arthropod interactions especially mutualism.

Mr A.A. SANDERSON, B.Sc. Dip.Sc.Ag., 70 Ocean Avenue, Port Lincoln, SA 5606. Andrew is interested in pest management, *Heliothis* biology and specimen collection.

Mr D.D. WALLACE, B.Sc.(Hons), Department of Ecology and Evolutionary Biology, Monash University, Clayton, Vic 3168. Dugal is a postgraduate student with interests including acarology, mutualism and predatory/prey interactions.

Elected 21 January 1992

Mr D.J. ATKINSON, B.Sc.(Hons), Bureau of Rural Resources, PO Box E11, Queen Victoria Terrace, Canberra, ACT 2600. David is interested in epidemiological models, quarantine pests and vectors of plant diseases.

Miss J.J. BEARD, 2 Jagger Street, McDowall, Qld 4053. Jennifer is a student interested in insect field collection and taxonomy.

Ms C. DITCHFIELD, B.Ag.Sc., Department of Horticulture, University of Western Sydney, Hawkesbury, NSW 2753. Carolyn is an MSc student with interests in integrated pest control, pesticide tolerance and genetic analysis.

Mr R.J. LLOYD, Cert. Rur. Tech., PO Box 102, Toowoomba, Qld 4350. Richard has a background in *Heliothis* population dynamics, lucerne pests, sorghum midge and soil insect pests.

Miss S. MCDOUGALL, B.Sc.(Hons), Department of Entomology, 218 Wellman Hall, UCB Berkeley, CA 94720, USA. Sandra is a PhD student and is interested in biological control.

Mr V.V. MADHUSUDHAN, B.Sc., M.Sc.Ag., Department of Crop Protection, Waite Agricultural Research Institute, Glen Osmond, SA 5064. Mr Madhusudhan is a PhD student with interests in the salivary physiology of Hemiptera and resistance mechanisms.

Mr M.J. STEINBAUER, B.Ag.Sc.(Hons), 16 Loch Street, Geelong East, Vic 3219. Martin is a PhD student with interests in biological control, dung beetles, plant/insect interactions and forest/agricultural entomology.

Mr M.J. STORRS, PO Box 533, Jabiru, NT 0886.

M. TICHON, B.Sc., Abbott Agricultural Products Division, PO Box 394, North Ryde, NSW 2113. Mike is a Field Research and Development Manager with general entomological interests.

Mr S. WINTERTON, 1/10 Perina Street, Toowoomba, Qld 4350. Shaun is interested in aquatic insect biology and ecology, Odonata and *Heliothis* parasitoid culturing.

Retired from membership

E. CALLAN, 13 Gellibrand Street, Campbell, ACT 2601.

Mr K.J. FERGUSON, 42 Scoter, Avenue, Paradise Point, Qld 4216.

Mr J.T. HAMILTON, 467 Manuka Road, Kettering, Tas 7155.

Mr C. NADOLNY, Department of Zoology, University of New England, Armidale, NSW 2350.

Dr E. RIEK, 19 Duffy Street, Ainslie, ACT 2602.

Change of Address or Title

Dr P. ALLEN, Department of Agriculture, PO Box 63, Port Adelaide, SA 5015.

Dr W.J. BAILEY changes to Associate Professor.

Dr D.L. EMERY, NSW not ACT.

Dr G.S. FARRELL, Winnellie, NT 0821.

Miss A.J.A. GREEN, 3 Stewart Street, Launceston, Tas 7250. Changes to retired membership.

Mr T.A. HEARD becomes Dr T.A. Heard.

Ms A. HILL, C/- Plant Protection Unit, South Pacific Commission, Private Mail Bag, Suva, Fiji Islands.

Mr M LINDSAY, University of Western Australia, Department of Microbiology, QE II Medical Centre, Nedlands, WA 6009.

Mr G. MCDONALD, Institute of Plant Sciences, Swan Street, Burnley, Vic., 3121.

Dr A.P. MACKEY, PO Box 694, Kenmore, Qld 4069.

A. MOORE, The Centre for Tropical Freshwater Research, Kevin Stark Research Building, James Cook University, Townsville, Qld 4811.

Mrs C.J. NEALE, 35 O'Connor Street, Oxley, Qld 4075.

Miss L. OLLEY changes to student membership.

K.R. PELLEN, C/- R. Pellen, 6 Dianella Road, Port Macquarie, NSW 2444.

Miss C. PETERS, house number is 475, not 485.

Mrs A.A. POUND changes from student to full membership.

Dr D.J. ROGERS, Entomology Branch, Department of Primary Industries, Meiers Road, Indooroopilly, Qld 4068.

Dr P.W. WALKEr, Australian Plague Locust Commission, Department of Industries and Energy, GPO Box 858, Canberra, ACT 2601.

Mr Qiao WANG changes from full to student membership.

Miss R. WHYTE, C/- Department of Primary Industries, PO Box 81, Emerald, Qld 4720, and changes from student to full membership.

Dr F.R. WYLIE, Queensland Forest Service, 80 Meiers Road, Indooroopilly, Qld 4068.

Mr A.E. WRIGHT, 18 Templetonia Crescent, City Beach, WA 6015.

Update of Membership (as of 26 November, 1991)

Overseas: 66	Qld: 195	ACT: 121
NSW: 169	Vic: 108	SA: 68
NT: 17	Tas: 29	WA: 52

Address unknown: 7

Membership by Category is:

Full: 644	Student: 100	Retired: 60
Honorary: 4	Joint: 24	

TOTAL: 832

Financial Status

Financial: 789 Unfinancial: 43

From the Minutes

The Treasurer has taken on the job of computerising the records which should help in the handling of subscriptions and making sure we can keep better track of the money.

The Executive wrote to Dr Geoff Monteith to thank him for handling the sale of 'Insects of Australia' for the Society. This has not only provided members with the books at a very good price, but also has earned some money for the Society. We are grateful for the time and effort he has put into this.

We have also thanked Mr Murray Upton for his contribution in preparing the new edition of 'Methods for Collecting, Preserving and Studying Insects and Allied Forms' for the Society. he has done a great job in producing a completely new and updated version of this popular book. it was published in mid-1991 and will be officially launched at the Hobart AGM.

ANNUAL REPORT, FEBRUARY 1992
The Australian Entomological Society Inc.

The Executive is pleased to present the Society's Twenty Third Annual Report for the period July 1991 to January 1992.

Executive Meetings

The Executive met on six occasions. Meetings were also attended by the Assistant Secretary, the Assistant Treasurer and the W.A. Regional Councillor.

Officers, Councillors and Executive Appointments

EXECUTIVE OFFICERS:	
President	Assoc Prof. D.F. Hales
Vice President	Dr T.J. Ridsdill-Smith
Secretary	Assoc. Prof. J.D. Majer
Treasurer	Mr P.R. Davis
Public Officer	Dr I.D. Naumann
Chief Editor	Dr P.G. Allsopp
Business Manager	Mr J.F. Donaldson
OTHER COUNCILLORS:	
Technical Editors	Dr A.L. Bishop
	Dr I.D. Naumann
	Dr G.G. White
News Bulletin Editor	Dr G.B. Monteith
REGIONAL COUNCILLORS:	
QLD	Mr D.H. Foley
	Mr B. Franzmann
	Mr R.I. Storey
NSW	Mr R. Faulder
	Mr J.G. Clancy
	Dr S. McEvey
ACT	Dr S. Shattuck
	Dr E.J. Wright
VIC	Mrs J.A. Horne
	Dr A. Yen

TAS ..... Dr T. Kingston
SA ..... Dr A.D. Austin
WA ..... Mr J. van Schagen
NT ..... Mr P. Dostine

REPRESENTATIVE COUNCILLORS:
Entomological Society of Qld — Ms C. Neale
Entomological Society of NSW — Dr G.R. Brown
Entomological Society of Vic — Dr R. Field

EXECUTIVE APPOINTMENTS:
Assistant Secretary — Mr R.N. Emery
Assistant Treasurer — Dr I. Dadour
Assistant News Bulletin Editor — Mr G.I. Thompson
Editorial Assistant — Mrs J. Allsopp
Overseas Correspondents — Mr J. Tenquist (NZ), Prof. R. Kumar (PNG)

CONSERVATION COMMITTEE:
Ms P. Greenslade (Convener)
Dr T.R. New (Vic), Dr E.G. Mathews (SA)
Dr B.Y. Main (WA), Dr A.N. Andersen (NT)
Prof. R.E. Jones (Qld), Dr J.M.E. Anderson (NSW)
Mr L. Hill (TAS)

EDITORIAL BOARD
Dr I. Abbott, Dr P.T. Bailey
Dr W.J. Bailey, Dr B.K. Cantrell
Dr M.J. Fletcher, Dr B.R. Champ
Assoc. Prof. D.F. Hales, Dr K.L.S. Harley
Assoc. Prof. F.J. McDonald, Dr M.J. Rice
Dr D.J. Rodgers, Dr R.C. Russell
Dr T.C.R. White

23RD AGM ORGANISING COMMITTEE:
Mrs M.A. Williams (Convener)
Dr J.L. Madden, Dr P.B. McQuillan
Dr H.J. Elliot, Dr T. Kingston

24TH AGM ORGANISING COMMITTEE:
Dr R. Storey (Convener), Ms M. Ablin (Secretary)
Mr K. Chandler (Treasurer), Dr H. Fay (Sessions)
Dr C. Hill, Mr R. Piper

HONORARY MEMBERS:
Dr I.F.B. Common
Dr E.N. Marks
Dr. K.R. Norris
Dr C.N. Smithers

MACKERRAS MEDALLISTS:
1984 Dr J.A.L. Watson
1986 Dr R.W. Sutherst
1988 Dr T.R. New
1990 Dr R.A.I. Drew
1992 Dr E.S. Nielsen

SUSTAINING ASSOCIATES:
Australian Entomological Supplies
Cyanamid Australia Pty Ltd, Ciba Geigy Ltd
Dow Chemical (Aust.) Ltd, ICI Australia Ltd
Shell Chemical Australia Ltd, Bayer Australia Ltd

Membership:

The Society's membership continued to increase with 19 new members enrolled. As of 26 November, 1991, after resignations and the striking off of unfinancial members, membership increased by 23, bringing our total number to 832. There are now 644 full members, 100 student members, 60 retired members, 24 joint members and 4 honorary members.

Australian Entomological Soc. Research Grants:

The fourth round of applicants has now been assessed by the panel of referees. The successful applicants are:

Dennis REEVES - Survey of Odonata at "Heathlands" and Jardine River National Park ($566).
Deborah KENT - Visit to Tasmania to gain further expertise in ambrosia beetle research ($490).
Paul DANGERFIELD - Field work to collect cardiochiline braconid wasps in central and northern Australia ($1,000).

In addition, the Society made a special grant of $1,000 to Des FOLEY to assist with the "Living with Insects - Friends and Foes" display at the Queensland Museum in Brisbane.

Biological Illustration Competition:

Four black and white and no colour entries were received. The winning black and white entry is:

Sylvia BUCKMAN - Illustration of a carabid

Phil Carne Student Prize:

Two entries were submitted for judging this year. The prize was awarded to Ann SCOUGALL of Curtin University, Perth who will present her paper entitled "Impacts of grazing on the soil flora and soil fauna at Jam-York gum woodland remnants in the Western Australian wheatbelt" at the Hobart meeting.

ACKNOWLEDGMENTS

At the end of its four year term in office this Executive would like to record its thanks for the major contributions to the growth and current strength of the Society made by the Regional and Representative Councillors, the Editors of the Journal, members of the Editorial Board, members of the Executive Committees and the appointed Assistant Officers. In particular, we would like to highlight the work of two people who are standing down at the meeting after long and outstanding service to the Society. Geoff MONTEITH has built up *Myrmecia*, of which we are very proud, to be one of the best Society News Bulletins in the world. We would also like to thank the Assistant News Bulletin Editor, Geoff THOMPSON, for his invaluable contribution to this endeavour. John DONALDSON has been Business Manager of the Society for 15 years. He handles the finances of the Journal, in particular, and the reprints. We wish them well in their well earned rest from these duties. The Society has been very lucky to have people of such high calibre to serve it over the years. We would like to thank Beverley Jones for efficiently typing the Executive Minutes and Reports.

We would also like to take this opportunity to congratulate the incoming Adelaide Executive on their elections, and wish them well for their term of office. We will try to make the changeover as

smooth as possible. This will be the first time the headquarters of the Society has been in South Australia.

On behalf of the Executive.

J.D. MAJER
Secretary

T.J. RIDSDILL-SMITH
Vice-President
Chairman of the Executive

ANNUAL REPORT OF THE TREASURER FOR THE YEAR 1991

The audit of the Society's accounts shows it remains in a strong financial position with total assets of $67,455. This is despite an estimated operating loss of $5,504 for 1991. This compares to an operating loss of $10,539 for the previous year.

There are several points which need to be clarified in relation to these figures. Grants amounted to $9,722 in 1991 compared to $2,050 for 1990. The higher figure includes extra Research Grants in 1990 of $5,850 and Society sponsorship of $1,500 for an insect poster produced by the Queensland Museum. The amount available for Research Grants is directly tied to interest rates and Grants will need to be reduced in future in line with falling interest rates.

Bad debts, and provision for them, amounted to $7,890; an increase of $5,354 over the previous year. This is an allowance for members who have not paid for 1991. This is obviously a 'worst case' situation and the actual figure will be lower than this. This provisioning for bad debts has only been done in the past two years.

Accrued interest showed a reduction due to falling interest rates and a mistake by the Commonwealth Bank in setting up the Cash Management Call Account for the Society. This resulted in a much lower rate of interest being credited to the account than intended. The mistake has been rectified, but the interest owed will be paid into the account in 1992.

The cost of producing *Myrmecia* was $8,933 for 1991. This was 21.7% of the total General Account income of $41,118 (this excludes income associated with orders for "Insects of Australia"). Advertising income of $515 was generated by *Myrmecia*.

The Publication Account recorded a profit of $3,514 compared to a loss of $8,618 for 1990. The major difference between the two years is a fall in printing costs for 1991 of $9,805. A transfer of $11,893 was made to the Publication Account from the General Account to cover costs associated with the printing of the considerably revised Miscellaneous Publication No. 3 (The Collection & Preservation of Insects) and Christmas cards.

A transfer of $15,850 was made from the Research Grants Account to the General Account to cover any possible temporary short-fall in funds. Funds should be available to repay this amount when the term deposit is renewed in February.

The profit resulting from the 21st AGM was paid into the General Account in 1991 and had a significant positive effect on the Society's financial position.

I would like to acknowledge Dr Geoff Monteith and Geoff Thompson for their part in organising the purchase and distribution of hundreds of copies of the second edition of "The Insects of Australia" on behalf of the Society. This not only resulted in very substantial discounts to our members, but also earned a significant profit for the Society.

The auditor for 1991, Mr John Graham, deserves special mention for completing the audit in time for the early AGM. This included a late night trip into his office the night before I left for the AGM to finalise the report.

The Society will not be liable to pay tax for the 1991 financial year.

I recommend that subscriptions to the Society for the next financial year remain unchanged.

I extend my gratitude to Dr Ian Dadour for his efforts as Assistant Treasurer during the year. I wish the incoming Treasurer a smooth take-over and hope the recent computerisation of the members' records is a positive step.

AUDITOR'S REPORT

I have conducted an audit of the books of account of the Australian Entomological Society Incorporated ("The Society") for the year ended 31 December, 1991 in accordance with Australian Auditing Standards.

In my opinion the attached balance sheet, profit and loss statements, source and application of funds and notes to the accounts: have been prepared in accordance with relevant Australian Accounting Standards and applicable approved accounting standards; and give a true and fair view of the financial position of the Society as at 31 December, 1991.

In forming this opinion I have obtained all the explanations and information that were, in my belief, necessary.

John R. Graham CPA (Taxation)
25th day of January, 1992

The Australian Entomological Society Inc
BALANCE SHEET AS AT 31 DECEMBER, 1991

	Note	1991($)	1990($)
CURRENT ASSETS			
Cash	2	10,638	17,865
Receivables	3	1,654	4,230
Inventories	4	20,076	15,352
		32,368	37,447
NON CURRENT ASSETS			
Investments	5	49,339	57,378
		81,707	94,825
Less			
CURRENT LIABILITIES			
Creditors & Accrued Charges	6	10,202	13,249
Provision for Bad Debts	7	4,050	1,620
Total Liabilities		14,252	14,869
Total Net Assets		67,455	79,956

ACCUMULATED FUNDS

Retained funds	8	67,455	79,956

The Australian Entomological Society Inc
GENERAL ACCOUNT

Statement of Income and Expenditure for Year Ended 31 December, 1991.

	Note	1991($)	1990($)
Income			
Advertising Income			199
CSIRO Journal		1,350	2,570
Insects of Australia		53,615	
Interest Received		6,105	7,134
Other Income			292
Return of Funds AGM Committees		7,110	2,700
Sales		515	276
Subscriptions Received		24,012	22,524
Medals Closing Stock 31/12/91		2,026	2,229
		94,733	37,924
Expenditure			
Medals Opening Stock 1/1/91		2,229	2,229
AGM Expenses		600	2,200
Audit/Accounting	9	950	3,300
Bank Charges & Other Expenses		452	203
Bad Debts Written Off		2,730	
Biological Illustration Competition			800
Creditors Written Back			(5,220)
Executive Travel		755	1,000
Furniture & Fittings			222
Grant to Publications Account		11,893	10,000
Insects of Australia		50,875	
News Bulletin		8,933	7,507
Petty Cash/Other Expenditure		2,286	193
Postage		1,164	2,120
Printing & Stationery		(769)	2,505
Provision of Bad Debts		5,160	2,536
Publications & CSIRO		440	1,510
Research Grants		9,722	2,050
Salary Editor's Assistant		6,000	5,823
Student Awards			590
Subscription to FASTS		331	277
		103,751	39,845
Operating Profit/(Loss) before Tax		(9,018)	(1,921)
Income Tax Expense (Benefit)		-	-
Operating Profit/(Loss) after Tax		(9,018)	(1,921)

The Australian Entomological Society Inc
PUBLICATIONS ACCOUNT

Statement of Income and Expenditure for Year Ended 31 December, 1991

	1991($)	1990($)
Income		
Subscriptions Received	19,096	16,480
Interest Received	125	707
Reprints and Back Issues	12,874	11,173
Grant from General Fund	11,893	10,000
Closing Stock 31/12/91	18,050	13,123
	62,038	51,483
Expenditure		
Opening Stock 1/1/91	13,123	13,671
Bank Charges & Other Expenses	125	134
Directories		2,100
Petty Cash	1,206	1,150
Postage Journals	2,546	2,134
Printing Costs	28,112	37,917
Printing of Reprints	2,235	1,470
Stationery	968	829
Wages		696
Cards	1,634	
Other Printing	8,575	
	58,524	60,101
Operating Profit/(Loss) before Tax	3,514	(8,618)
Income Tax Expense/(Benefit)	-	-
Operating Profit/(Loss) after Tax	3,514	(8,618)

The Australian Entomological Society Inc
CONSERVATION COMMITTEE ACCOUNT

Statement of Income and Expenditure for Year Ended 31 December, 1991

	1991($)	1990($)
Income		
Interest Received	128	31
Other Income		2,777
	128	2,808
Expenditure		
Other Expenses	390	276
	390	276
Operating Profit/(Loss) before Tax	(262)	2,532
Income Tax Expense/(Benefit)	-	-
Operating Profit/(Loss) after Tax	(262)	2,532

The Australian Entomological Society Inc
ANNUAL GENERAL MEETING COMMITTEES ACCOUNTS

Statement of Income and Expenditure for Year Ended 31 December, 1991

	1991($)	1990($)
Income		
Grant from General Account		1,000
Interest Received	193	766
Registrations		73,934
Other Receipts	285	
	478	75,700
Expenditure		
Accommodation		21,786
Catering		30,092
Excursions		1,810
Insurance		268
Other Expenses	53	462
Photographs		2,000
Printing & Stationery		1,414
Prizes/Awards		100
Rent of Venues		7,945
Souvenirs		2,727
Travel		692
Transfer to General Account	7,110	
	7,163	69,296
Operating Profit/(Loss) before Tax	(6,685)	6,404
Income Tax Expense/(Benefit)	-	-
Operating Profit/(Loss) after Tax	(6,685)	6,404

The Australian Entomological Society Inc
NOTES TO AND FORMING PART OF THE ACCOUNTS OF THE SOCIETY FOR THE YEAR ENDED 31 DECEMBER, 1991

NOTE 1 Summary of Accounting Policies

The attached accounts have been prepared in accordance with accounting standards issued by the Australian Society of Certified Practising Accountants and generally accepted accounting principles. The following notes explain the accounting method adopted where accounting standards allow differing accounting methods to be used.

(a) **Historical Cost**
The accounts have been prepared under the historical cost convention and have not been adjusted to take into account the changing value of money or its impact on the operating results of the Society.

(b) **Inventory**
Stock on hand has been valued at the lower of cost or net realisable value.

(c) **Income Tax**
The Society does not follow the principles of tax effected accounting when preparing its accounts. The Concept of Mutuality limits income tax to only investment income and a proportion of total expenditure will be allowed as a tax deduction. Additionally, the Society has carry forward tax losses, for which there is no virtual certainty that they will be ever totally offset against income. Consequently, the Society does not recognise any current income tax liability or future income tax benefit arising from its operations.

NOTE 2

	1991($)	1990($)
Current Assets - Cash		
Cash on hand	1	7
Cash at Bank		
- General Account	6,627	6,423
- Publications Account	4,010	11,435
	10,638	17,865

NOTE 3
Current Assets - Receivables

Debtors	1,654	4,230
	1,654	4,230

NOTE 4
Current Assets - Inventories

Stock on Hand		
- Publications	18,050	13,123
- Medals	2,026	2,229
	20,076	15,352

NOTE 5
Non-Current Assets - Investments

Interest Bearing Deposits		
- CBA Victoria Park WA	36,882	47,031
- Cash Management Acct	9,281	
- Sirocredit A/C 101440	3,176	10,347
	49,339	57,378

NOTE 6
Current Liabilities - Creditors & Accrued Charges

Creditors & Accruals	1,950	6,071
Prepaid Subscriptions	8,252	6,228
	10,202	12,299

NOTE 7
Current Liabilities - Provision for Bad Debts

Balance Brought Forward	1,620	
Provision Created	5,160	2,536
Less Bad Debts Written Off	(2,730)	(916)
	4,010	1,620

NOTE 8
Accumulated Funds - Retained Earnings

Balance 1 January 1991	79,906	81,559
Surplus/(Loss) for Year		
- General Account	(9,018)	(971)
- Publications Account	3,514	(8,618)
- AGM Committee Account	(6,685)	6,404
- Conservation Cttee Account	(262)	2,532
	67,455	80,906

NOTE 9
Auditors' Remuneration
Total amounts receivable by the Society's Auditors

Audit Fees		
1989 Auditor		950
1990 Auditor	750	750
Other Services		
1989 Auditor		1,400
1990 Auditor	200	200
	950	3,300

REPORT BY THE CHIEF EDITOR TO THE 23RD ANNUAL GENERAL MEETING

This report covers the period 1 January to 31 December, 1991.

Journal

Production statistics for the *Journal of the Australian Entomological Society* during the period (with figures for 1990 in parentheses) were:

Manuscripts received	85	(77)
Manuscripts accepted	48	(53)
Manuscripts rejected	11	(8)
Manuscripts withdrawn	8	(9)
Manuscripts with Tech Eds	66	(48)
Pages ready for publication	208	(192)

The number of manuscripts received during the year was up slightly from previous years. Acceptances were relatively constant through the year which left a good surplus for the first two issues of 1992. Time to publication for a manuscript requiring minimal changes remains at about one year, comparing favourably with similar journals.

Volume 30 comprised the following parts:

Part	Published	Pages	Papers	Reviews
1	28 Feb	96	16	4
2	31 May	96	10	3
3	30 Aug	64	14	5
4	29 Nov	96	19	2

The total number of pages (352) was the same as last year and was above the average for the previous 10 volumes. Part 3 had only 64 pages because it had to be finalised before my departure on study leave in March. The number of pages ready for publication will allow at least the first two parts of volume 31 to be 96-page issues.

Publication schedules have been maintained and look like doing so for 1992.

Book reviews continue to perform a useful function in filling otherwise blank pages. No pages were left blank in volume 30.

The May 1991 issue saw the publication of the first (hopefully) recent "essay" type paper. This was based on Tim New's presidential address of 1990. I would welcome more of this type of manuscript.

In general, the Journal remains in good shape with a constant flow of diverse manuscripts. Journal content can only reflect what is submitted. I am happy to receive manuscripts on any aspect of Australian entomology and encourage all members to use the Journal for publication.

Miscellaneous Publications

During 1991 the new edition of *Methods for Collecting, Preserving and Studying Insects and Allied Forms* by Murray Upton was published. This saw a complete re-write of the previous edition and Murray is to be congratulated on his endeavour. This is the most successful of the Society's Miscellaneous Publications and it continues to sell well.

General

Peter Bailey, Win Bailey, Bryan Cantrell, Murray Fletcher, John Rogers and Richard Russell were appointed to vacancies on the Editorial Board. This gave the Board a group of members with wide experience and reasonable geographic spread.

I have proposed to Council changes to the operation of the refereeing and reviewing processes of the Journal. These have been triggered by increased work loads on the Technical Editors and myself and by the need to streamline our processes. The suggested changes are:

1. Quicker reminding of recalcitrant referees - this is being implemented.
2. Increase the number of Technical Editors by one - this would reduce workloads, leading to quicker consideration of reports and quicker turnaround.
3. Delete reference to specific areas of responsibility for Technical Editors in Article 28 of the Constitution.
4. Abolish the Editorial Board - the Editorial Board was set up to maintain standards. The responsibility of standards should rest with the Chief Editor and through him to the Technical Editors. Board members are not elected and are not directly answerable to the membership. The Chief Editor and Technical Editors are elected and, if the membership is dissatisfied with their performance, they can be voted out of office.

Alan Bishop, Ian Naumann and Graham White have given excellent service to the Society in their capacities of Technical Editors. I thank them for their input. The assistance of Jenny Allsopp as Editorial Assistant is greatly appreciated as is the assistance of Ron Page of ATA Typesetters and Steve Gould of Watson-Ferguson.

P.G. ALLSOPP
Chief Editor

ANNUAL REPORT OF NEWS BULLETIN EDITOR FOR CALENDAR 1991

A synopsis of costs, advertising revenue and page size for the four issues of 1991 is as follows:

	Costs	Advertising Income	Pages
Feb. issue	237	275	60
May issue	2160	240	52
Aug. issue	2745	85	64
Nov. issue	2244	140	40
Totals	9522	540	216

I am relinquishing editorship at the Hobart AGM and urge support for the new Editor when he takes over. Certain folk in Brisbane who have contributed to the success of *Myrmecia* during the last 10 years were thanked in my last editorial. In particular, I'd like to repeat my thanks here to Assistant News Bulletin Editor, Geoff Thompson, who has made the task much easier. In recent times he has coordinated the discount offer on "Insects of Australia" which generated sales of 375 sets of the book at a gross total of more than $55,000 which included a useful profit to the Society. Finally, I'd like to thank the scores of Regional Councillors spread around Australia who have relentlessly sent in their copy and made *Myrmecia* a great success.

G.B. MONTEITH
News Bulletin Editor

REPORT OF THE BUSINESS MANAGER FOR VOLUME 30 AND THE YEAR 1991

Number 1 printed on 28.ii.1991	96 pages
Number 2 printed on 31.v.1991	96 pages
Number 3 printed on 30.viii.1991	64 pages
Number 4 printed on 29.xi.1991	96 pages

Expenses

	1	2	3	4	Total
Journal	4762.00	4762.00	3318.00	4762.00	17604.00
Reprints	545.20	435.00	245.60	371.20	1597.00
Postage	655.04	683.72	761.22	876.69	2976.67
Type setting	3589.00	3589.00	2405.00	3552.00	13135.00
Mailing	204.00	206.00	216.00	201.00	827.00
Envelopes	25.00	25.00	30.00	30.00	110.00
TOTAL	9780.24	9700.72	6975.82	9792.89	36249.67

Income

Reprints	3212.50	2640.00	1865.00	2700.00	10417.50
Subscriptions					16196.94
TOTAL					26614.44

Deficit for Volume 30 9,635.23

FINANCIAL REPORT FOR THE YEAR 1991

Opening Balance 11,435.93

Income

Subscription	19,096.48
Transfer from general acc.	11,893.00
Sale of Vol. 6 onwards	122.50
Reprints	10,362.50
Sale of M.P. 1	1.00
Sale of M.P. 3	1,456.25
Sale of M.P. 5	180.00
Sale of M.P. 6	237.22
Invertebrates	23.95
Cards*	911.55
Postage recovered	262.45
Interest	125.52
Excessive payment	162.80
Membership subscription	40.00
TOTAL	44,875.22

*1 box of cards sent to AGM in Melbourne - to date no returns or money have been received.

Expenses

Printing of Journal	22,466.00
Printing of reprints	2,235.40
Type setting	11,664.80
Postage of Journal	2,099.98
Mailing charge	626.00
Envelopes	858.11
Petty cash	1,200.00
FDT	21.80
Australia Post	75.00
W.C.B.Q.	25.00
Advert. leaflets	80.00
Preparation of envelopes & invoices	140.00
Printing of M.P. 3	8,575.00
Preparation & printing of cards	1,554.00
Reprint refund	427.70
Refund of excessive payment	252.80
TOTAL	52,301.59

Closing Balance 4,009.56

PETTY CASH

Opening Balance 6.76

Income

From publication acc. 1,200.00

Expenses

Postage	441.95
Stamps	690.14
Stamp duty	19.30
Stationery	44.75
Cheque clearance	9.00
Shortfall	1.00
TOTAL	1,206.14

Closing Balance 0.62

J.F. DONALDSON
Business Manager

ANNUAL REPORT CONSERVATION COMMITTEE

No major submissions were written during this period, although a short document was prepared commenting on the Resource Assessment Commission's (RAC) draft report on the Forest and Timber Resources of Australia. Alan Andersen commented separately on RAC's Kakadu report.

We are continuing to provide articles for the Endangered Species Network Bulletin, which appears sporadically. The second number appeared in June with Barbara York Main's article on Trap Door Spiders. We have an article for the third issue ready on ant diversity by Penny van Oosterzee.

I attended a meeting of the conservation Biology Meeting in Australia and Oceania in October as a representative of the Conservation Committee and a report on the meeting was printed in *Myrmecia*.

The committee is currently preparing an "Australianised" version of the Council of Europe Committee of Minister's Statement on the protection of saproxylic organisms and their biotopes (Recommendation No. R [88]) for submission to the Committee of Conservation

and Environment Ministers of Australia and New Zealand and hopefully endorsement.

The Heritage Commission's Invertebrate Site Registration Project in South Australia, Victoria and New South Wales has taken a considerable amount of my and some other Committee members' time in these States. Although the grant is being administered by the South Australian Museum, the Heritage Commission stipulated that it should be run in close association with members of the Society and using their expertise. Because of this, the President sent a letter of support from the Society with the grant application. The contract allows for submissions prepared by a member of the Society to be paid for. Nine Victorian submissions have been prepared, two in the ACT and one in New South Wales. Nine further submissions are in various stages of preparation in New South Wales and one in South Australia.

Finally, I would like to thank all the members of the Committee who have, as usual, worked extremely hard and contributed a great deal to our activities throughout the year. They provided me with much support for which I am most sincerely grateful.

Penelope GREENSLADE
Convenor, Conservation Committee

MINUTES OF THE 23RD ANNUAL GENERAL MEETING

held at the University of Tasmania at 4.00 pm on Tuesday, 4 February, 1992.

1. Opening

The President, Assoc. Prof. D.F. Hales, opened the meeting and welcomed the other members in attendance. (A signed register is attached to the file copy of these minutes).

2. General Announcements

Nil.

3. Announcement of Proxies and Apologies

Apologies were received from (proxies in brackets): Dr A. Austin (Mr J. Jennings), Dr E.J. Wright (Dr I. Naumann), Mrs J. Horne (Dr A. Yen), Dr T. New (Dr A. Yen), Mr J. van Schagen (Mr P.R. Davis), Mr A. Henderson (Dr A. Yen).

4. Deaths of members recorded since 22nd AGM

No deaths have been recorded.

5. Minutes of 22nd AGM

The minutes of the 22nd Annual General Meeting were adopted (moved A. Clift, seconded J. Jennings).

6. Matters Arising from the Minutes

None.

7. Executive Annual Report

The Vice President, Dr T.J. Ridsdill-Smith highlighted the main points in the first section of this report.

The Treasurer, Mr P.R. Davis, then spoke to the Treasurer's Report. There followed some discussion about the implications of decreasing interest rates to the funds available for the Society's Research Awards. Mr Davis said that the size of the Awards may need to be adjusted to take this into account. Dr D. Horning raised the possibility that postage for business mail will be increasing next year and the incoming treasurer should be prepared for this.

The Chief Editor, Dr P. Allsopp, presented the Chief Editor's report. No questions arose from this.

The Secretary presented the News Bulletin Editor's Report and the Business Manager's Report. Once again, there was no discussion about the content of these reports.

The Convenor of the Conservation Committee, Ms P. Greenslade then presented the Conservation Committee report, but because there is currently no convenor of the Marketing Promotions Committee, no report from the latter was presented.

Following this, the motion that the Annual Report and Conservation Committee report be accepted was carried unanimously (moved Dr D.S. Horning, seconded Dr M. Fletcher).

8. Competitions and Awards

Phil Carne Prize 1992. The Phil Carne Prize winner, Anne SCOUGALL, has been announced in the Annual Report and she has now presented her paper at the 23rd Annual General Meeting and Conference. The President presented Anne with the prize and certificate and congratulated her on the standard of her entry.

Biological Illustration Competition 1992. In view of the restricted number of entries, there was only one winner this year, Sylvia BUCKMAN, who had prepared a black and white illustration of a carabid. This, and the other entries, were on display in the poster-presentation room.

1992 Ian Mackerras Medal. The President announced that the winner of the 1992 Ian Mackerras Medal was Dr Ebbe NIELSEN of the CSIRO Division of Entomology. The medal was presented at the Conference Dinner which immediately followed the Annual General Meeting.

9. Australian Entomological Society Research Grants

These have been announced in the Annual Report. Ms Debbie Kent was presented with her grant and Mr Des Foley had already received his special award to assist with the "Living with

Insects - Friends and Foes" display at the Queensland Museum in Brisbane.

10. Business Arising from the 43rd Council Meeting

Review of the Guidelines for the Biological Illustration Competition. Dr T. Houston of the WA Museum has agreed to convene a subcommittee to look at this.

Editorial Changes to the Journal. The President outlined some of the problems the Journal was experiencing with the manuscript processing/refereeing process (see Chief Editor's Report). She said that Council had recommended the increasing of the number of technical editors from three to four in order to share the increasing workload. This requires changes to the constitution and hence cannot take place immediately.

Dr T. Kingston suggested that the constitution be reworded to allow flexibility in the number of technical editors and there was support for this idea. The Motion that the number of technical editors be increased was carried unanimously (moved A. Clift, seconded T. Kingston).

The President said that the second recommendation from Council was that the designation of technical editors to specific areas of expertise be deleted from the Constitution. This recommendation was also carried unanimously by those present at this meeting (moved N. Heather, seconded T. Kingston).

Changes to the Constitution. Dr Naumann spoke about his review of the constitution, which is intended to refine the document rather than precipitate drastic changes. He wants to remove some of the ambiguities in the selection procedure for honorary members, neutralise the references to gender and bring the document into line with the requirements of the new Associations Incorporation Act, 1991.

Venue of the 25 Conference and AGM. An invitation has been extended to the South Australians to host this meeting.

11. Announcement of Office-Bearers and Councillors for 1992

The nominations for office bearers and councillors for 1992 are:

Executive Officers:

President,	Dr G.H.S. Hooper	proposed T.J. Ridsdill-Smith, seconded P. Allen
Vice-President,	Dr P. Allen	K. Henry/G. Baker
Secretary	Dr P. Madge	F. Fitzgibbon/R. Laughlin
Treasurer	Mr J.T. Jennings	A. Austin/P. Dangerfield
Public Officer	Dr I.D. Naumann	J. Cardale/T. Weir
Chief Editor	Dr P.G. Allsopp	P. Samson/I. Kay
Business Manager	vacant	

Other Councillors:

News Bulletin Editor	Dr M.J. Fletcher	D. Hales/L. Hughes
Technical Editors	Dr I.D. Naumann	P. Allsopp/P. Samson
	Dr A.L. Bishop	P. Allsopp/P. Samson
	vacant	

Regional Councillors

QLD

Ms M. Griffiths	D. Foley/G. Daniels
Mr B. Franzmann	renominated
Dr H.A.C. Fay	R. Storey/I. Cunningham

New South Wales

Mr R.J. Faulder	renominated
Dr S. McEvey	renominated
Mr J.G. Clancy	renominated

Victoria

Mr A. Henderson	J. Horne/J. Majer
Dr A. Yen	renominated

ACT

Dr S. Shattuck	renominated
Dr D. Dall	I. Naumann/E.J. Wright

South Australia

Dr A.D. Austin	renominated

Tasmania

Dr T. Kingston	renominated

Western Australia

Mr J. van Schagen	renominated

Northern Territory

Mr P. Dostine	renominated

Representative Councillors

Ent-Soc. Qld	Ms C. Neale
Ent-Soc. NSW	Dr G. Brown
Ent-Soc. Vic.	Dr R. Field

At this point the outgoing Executive stepped down and incoming Executive took the chair.

12. Report of the 23rd AGM Organising Committee

An informal report was presented by M. Williams. There are between 85-95 registrants, with over 50% staying in college. A modest amount of sponsorship has been obtained. A full report by the Organising Committee will be published in the next issue of *Myrmecia*.

13. Report of the 24rd AGM Organising Committee

Dr H. Fay presented this report:

The 24th meeting will be held in Cairns, North Queensland, in the first or second week of July 1993. Ross Storey (QDPI) is convenor of the Organising Committee which is made up of Marie Ablin (Lands Department), Keith Chandler (BSES), Chris Hill (JCU), Harry Fay and Richard

Piper (QDPI). The venue is likely to be a hotel on the esplanade, but cheaper accommodation should be available for students. Accommodation is at a premium in Cairns in July so the need for early registration must be stressed. The scientific program will include a variety of sessions and a mid-conference excursion to various attractions on the Atherton Tableland will be offered. Information on Reef trips etc. will be made available to delegates. We hope to see you all in Cairns in 1993!

14. Other Business

14.1 The President, Dr G. Hooper, extended a vote of thanks to the outgoing News Bulletin Editor and the Business Manager, Geoff Monteith and John Donaldson.

14.2 He called for a Motion to authorise the Executive to appoint a new Business Manager. This Motion was moved by Dr. Hales, seconded by P. Davis and carried unanimously.

14.3 Dr Hooper then thanked the Society for the honour of electing him as President and extended a vote of thanks to the outgoing Executive for their service during their terms of office.

15. Close

There being no other business the President closed the meeting at 5.30 pm.

HOBART CONFERENCE SCIENTIFIC PROGRAMME

The following posters and papers were presented at the Hobart Conference. For papers with more than one author, the person who presented the paper is underlined.

Entomology in the service of the Australian Community

Max WHITTEN -- How Entomology serves Australian Society
John GOLDSMID -- People, health and insects
Philip WEINSTEIN -- National guidelines for the treatment of headlouse infestations in Australia

Insects in Temperate Forests

John MADDEN -- overview
Anna LEON -- Implementing an operational control strategy for the Tasmanian Eucalyptus leaf beetle, *Chrysophtharta bimaculata*
Roger FARROW -- Are eucalypts defended against insect attack by the terpenoid class of secondary plant compounds?
David WALTER and Dennis O'DOWD -- Life on the phylloplane: hairs, little houses and mutualistic mites
Steve CANDY and Humphrey ELLIOTT -- Development of the mountain pinhole borer *Platypus subgranosus* Schedl (Coleoptera: Curculionidae: Platypodinae)
Deborah KENT and Jack Simpson -- Eusociality in a species of Curculionidae

Working with Insect Conservation and Biodiversity: issues, methods and examples

Alan YEN -- Insect surveys: What is their contribution to conservation decision-making?
Jonathan MAJER and Harry RECHER -- Linking of invertebrates with vertebrates - one way to promote the conservation of invertebrates.
Peter CRANSTON, Terry HILLMAN and Rob COOK -- The use of drifting chironomid pupal exuviae in biological monitoring.
Penelope GREENSLADE -- Practical Conservation? Four years of the Conservation Committee, 1987-1991.
Matt BOLTON -- Insect specimens for environmental decision support.
Ebbe NIELSEN -- Checklists of insects: information, quality and feasibility
Keith HOUSTON and Jean JUST -- The Zoological Catalogue of Australia and the role of A.B.R.S.
Mark NEYLAND -- The ptunnara brown butterfly: Prospects for the long term survival of a rare species.
Alan YORK -- The impact of long-term fuel reduction burning on ant communities.

Taxonomy and biogeography

John LAWRENCE -- An illustrated interactive key to the larvae of Coleoptera
Andrew CALDER and John LAWRENCE -- A new genus of Australian Elateridae and a reassessment of elaterid subfamily relationships
Chris REID -- The biogeography of Tasmanian leaf beetles (Chrysomelidae)
Desmond FOLEY, J.H. BRYAN and N. BEEBE -- When looks are not enought: non-morphological means for identifying members of the *Anopheles punctulatus* complex from Papua New Guinea
Judith MELKSHAM -- Immature stages of *Torymoides* spp. (Hymenoptera: Torymidae) an ectoparasite of the biological control agent *Rhopalomyia californica.*

The Phil Carne Prize address

Ann SCOUGAL -- Impacts of grazing on the soil flora and soil fauna of Jam-York Gum woodland remnants in the Western Australian wheatbelt

The Presidential Address

Dinah HALES -- Gravy Trains and Bandwagons

Recent developments in insect quarantine

Mike JEFFERIES -- Recent developments in international insect quarantine.
Neil HEATHER -- Reconciling pest risk and disinfestation efficacy

Arthropod interactions with their hostplants, their environment and each other.

Seamus WARD and Paul WELLINGS -- In search of the unmeasurable: estimating the temporal variability in population density
Rod ELDER and Dan SMITH -- Pawpaws, oriental scale and three parasitoids
Paul WALKER, Genevieve CARRUTHERS and Gordon HOOPER -- The effect of fenitrothion on non-target organisms
H. PARK and J. ORSINI -- A model which describes the role of the wheatbelt termite, *Drepanotermes tamminensis*, in nutrient recycling within native vegetation in the Western Australian wheatbelt.
Robert MENSAH and John MADDEN -- Factors affecting *Ctenarytaina thysanura* oviposition on *Boronia megastigma* terminal shoots.
James RIDSDILL SMITH and Amanda ANNELLS -- Oviposition behaviour as a factor in subclover resistance to redlegged earth mite.
Alan CLIFT and M.A. TERRAS -- Factors affecting development of compost mite populations in cultivated mushrooms.
Dennis O'DOWD, C.R. BREW, D.C. CHRISTOPHEL and R.A. NORTON -- The antiquity of mite-plant associations in southern Australia.
Dugal WALLACE -- Mite-domatia associations: what's in it for the mites?
Shelley ROZARIO -- The relationship between leaf domatia and mites on grapevines.
Matthew MANNING and David WALTER -- What good is sex? The reproductive ecology of macrochelid mites.
Harry FAY and Keith HALFPAPP -- *Tinospora smilacina* (Menispermaceae) as a larval host plant of fruitpiercing moths in north Queensland.

Poster Exhibits

Genevieve CARRUTHERS, Gordon HOOPER and Paul WALKER -- The effect of fenitrothion on non-target organisms - methods and a summary of the 1990 spray trials.
Steve DOGGETT, D. DICKENSON, C.L. HUNT, R. MUNRO and R.C. RUSSELL -- Lyme disease research in sourtheastern Australia: an update
Robin GUNNING and Margorie BALFE -- Pyrethroid resistance in Australian *Helicoverpa armigera.*
Lionel HILL -- Colour in adult *Helicoverpa punctigera* (Wallengren) (Lepidoptera: Noctuidae) as an indiicator of migratory origin.
John T. JENNINGS -- The systematics and biogeography of the Australian Hyptiogastrine wasps (Hymenoptera: Gasteruptiidae)
Ian D. NAUMANN -- Australia's first flightless sawfly - a newly discovered Tasmanian endemic.
Tingkui QIN -- Pela Wax Scale and its wax production
Richard RUSSELL and Merilyn GEARY -- Studies of the vectors of the dog heartworm
Mark STEVENS and G.N. WARREN -- Evaluation of organophosphate insecticides for control of the rice bloodworm, *Chironomus tepperi* Skuse (Diptera: Chironomidae)
John VRANJIC -- Growth of eucalypt seedlings infested with scale insects under controlled nutrient regimes.

Organising Committee for the Hobart Conference (L to R): Dick Bashford, Peter McQuillan, Margaret Williams, Lionel Hill, John Madden

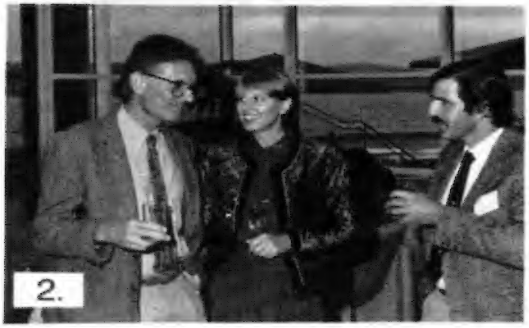
THE 23RD ANNUAL CONFERENCE - HOBART 1992

Official Photographs

The 1992 Executive (L to R): John Jennings, Paul Madge, Gordon Hooper, Ian Naumann, Peter Allen, Peter Allsopp.

Dr Ebbe Nielsen, head of the Australian National Insect Collection, CSIRO, Canberra, shows the 1992 Mackerras Medal which was presented to him at the Annual Dinner in Hobart by the President, Assoc. Prof. Dinah Hales.

The Annual Dinner 1992



MEMBERS ENJOYING THE CONFERENCE DINNER: (1) L to R - John Vranjic, Alan Yen and Tingkui Qin; (2) L to R - Jon Majer, Jenny Jones and Peter Davis; (3) Ian Common talks Lepidoptera with Ebbe Nielsen, the 1992 Mackerras Medalist; (4) L to R around the table - Andrew Calder, Ian Naumann, Peter Cranston (background), Penny Gullan, Dennis O'Dowd and Shelley Rosario; (5) L to R - Lou Rodgerson, Dugal Wallace, Debbie Kent and Matthew Manning; (6) L to R - Margaret Williams, John Madden and Murray Fletcher.

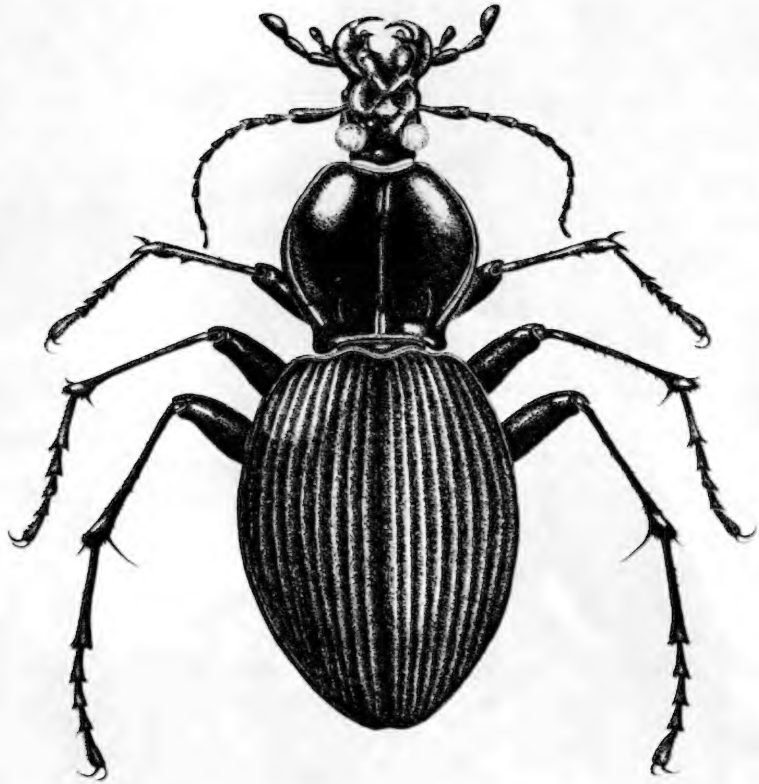
Other Conference Activities

(1) Humphrey Elliott explains current research on *Chrysophtharta* on the Florentine Valley Excursion; (2) Anna Leon outlines the day's activities on the Florentine Valley excursion; (3) At Mount Field National Park, Dinah Hales launches Murray Upton's new edition of "Methods for the Collection and Preservation of Insects"; (4) Anne Scougall receives Presidential congratulations at the AGM for winning the Phil Carne Prize; (5) They're Off in the FUN RUN (L to R) Roger Farrow, Anne Scougall, Robin Gunning, S. Watanasit, Rieks van Klinken and Jonathon Majer with a hardy group of spectators; (6) POSTER SESSION (L to R) Harry Fay, Mark Stevens, Robin Gunning and Peter Allsopp.

Student Award Winner

Anne Scougall of Curtin University in Western Australia, Winner of the Phil Came Prize 1992

Illustration Award



The winning entry in the Black and White Section of the Illustration Competition for 1992. A species of *Pamborus* (Coleoptera: Carabidae) illustrated by Sylvia BUCKMAN.

Regional News

SOUTH AUSTRALIA

Crop Protection Department

(Entomology Group) Waite Institute

The University has announced the appointment of Dr Otto Schmidt from the University of Freiburg, Germany, as the new Professor of Crop Protection. Otto, who is a molecular geneticist, has research interests in the immune system of insects and the way in which the symbiotic viruses and virus-like particles of parasitic wasps block their host's immune response. Otto is due to arrive in Adelaide at the beginning of March, but has already begun organising joint research projects with Andy Austin and Mike Keller.

With an end to exams, marking and building works on the floor below, the Department has swung back to things of a research nature, with many staff and students engaged in field work. Paul Horne, from the Plant Research Institute, Burnley, visited the Department for a week in November to discuss his work on the behaviour of potato moth parasitoids with Mike Keller. Brad Stolz, DPI Toowoomba, also visited Mike in January to work on the behaviour of *Trichogramma* in the wind tunnel. Andy Austin and Paul Dangerfield attended the Australian Academy of Science meeting in Canberra in August on "The role of biological collections in Australia".

Ross Lardner and Paul DeBarro have both recently submitted their Ph.D. theses. Ross' work on "Competitive host size utilisation of two species of parasitoids of *Liriomyza*" earned him a postdoctoral fellowship at Simon Frazer University, Canada. Paul's thesis was on "The ecology of the bird cherry-oat aphid, *Rhopalosiphum padi*. in the low rainfall wheat belt of South Australia", and he is currently seeing out the tenure of his grant from GRDC, working for the Department of Agriculture. Hugh Boyd completed an honour's project under Mike's supervision on the biological control of mealybugs in the Botanic Garden's Tropical Conservatory.

Peter Miles returned at the beginning of December after eight months study leave working in Switzerland at the Institute for Plant Physiology, and Dudley Pinnock has left to go on study leave, spending time at institutions in UK and USA.

Department of Agriculture

Not much activity in the entomology group at the moment, with Peter Bailey on long service leave for two months in Mexico, and Dennis Hopkins on annual leave. Greg Barker attended a quarantine meeting in Brisbane in mid-October.

Department of Zoology (Adelaide University)

Shelley Barker visited the ANIC for a week in November to examine their large bupestrid collection. He was well looked after by Tom Weir and brought back a number of specimens for further work.

James Wallman embarked on a blowfly collecting trip to Kangaroo Island over the Christmas/New Year break. A container of decomposed pig foetuses was used to lure calliphorids, and this also, on occasions, prompted cautious approaches by inquisitive Islanders.

Andy AUSTIN
Regional Councillor

NORTHERN TERRITORY

CSIRO - Division of Entomology

The New Year had barely uttered its first post-natal scream when the Mimosa Formation Bogging Team leapt to national prominence on 8 January with its multi-media presentation "The *Apion aculeatum* release". Yes folks, that Mexican mimosa flower bud feeder has finally made it out of quarantine. Media interest ran hot all week, with honorary entomologist Mark Lonsdale fielding press and radio interviews from around the nation. On the day of the release three camera crews made the trek out to the floodplains. Fortunately, a dry start to the wet season made the going fairly easy, although the flies, as usual, demonstrated their ability to literally get up your nose during the filming of interviews (well, Mark's anyway). Of course any chance of inflated egos from all this media attention soon disappeared when, a few days later the Mimosa Formation Bogging Team did what it does best - got well and truly stuck on the floodplain. Oh the joys of working on the best known weed in Australia.

With the dry season slowly giving way to the heat, humidity and storms of the build up, visitors to TERC have slowed. The CSIRO Board paid a quick visit in October and were very interested in the mimosa work. In late November Mark Lonsdale and Grant Farrell made the trek to Jabiru to talk with Michael Storrs about the *Salvinia* work in Kakadu and to look at his field sites.

Later in the day they gave talks to an ANPWS in-service training course for Kakadu park rangers outlining weed problems in the park, management strategies and the role of biological control. With the workshop on the management of *Mimosa pigra* not far away, deadlines for the production of the workshop handbook are near. Grant and Mark are scurrying to add the final touches to their respective chapters. Jason Major joined the traditional pre-Christmas southern migration after four months as a volunteer/casual worker. Thanks to Jason for his efforts.

CSIRO - Division of Wildlife and Ecology

Alan Andersen has returned intact from an ant collecting expedition in the jungles of Brunei. He seems quite proud of his discovery of an apparently new ant genus. Meanwhile, student Hanna Reichel (University of Wurzberg in Germany) has spent three months revealing the ant secrets of Holmes Jungle in Darwin's

backyard. Alan will spend a week at ANIC prior to the divisional meeting in early March.

NT Health - Medical Entomology Branch

The Branch is in the midst of the salt marsh mosquito control program at the moment with high tides and wet season rain. Paul Donaldson has been maintaining the helicopter applied Bti control program in the salt marsh. Control efforts have been very successful in keeping the lid on the numbers of salt marsh mosquitoes for most of the year.

The Branch report on investigations into blowflies and wheelie-bins has been presented to the Darwin City Council. The report indicated that plastic wheelie-bins are a major source of *Chrysomya megacephala* in the Darwin urban area. The major problem will be educating the public to manage the garbage to reduce fly breeding.

David Logan has returned from recreation leave, having caught up with colleagues in Brisbane. Gwenda Hayes maintained the fly monitoring program in Dave's absence.

Wendy Kelton is maintaining the arbovirus surveillance program. Regular collections of mosquitoes for virus isolation are made in Darwin and Katherine. Peter Whelan has had discussions with representatives from the North Australian Quarantine Service. There are plans to participate in a sentinel herds system to examine the distribution of antibodies to flavovirus in the NT.

There have been further interceptions of *Aedes aegypti* in Darwin by the quarantine authorities. This has prompted the Branch to step up surveillance procedures around vulnerable entry points in Darwin to ensure that this exotic mosquito does not become established.

NT Museum

In late November Alice Wells gave a talk in Darwin's State Reference Library "Under the Banyan Tree" series on "Bugs and bug collectors in the NT". While researching the talk she came across what must be the first use of biological control in the NT - the addition, in 1917, of water boatmen to rainwater tanks as a mosquito control measure.

Alice joined Cees van Achterberg (Leiden Museum) in Bali for the first two weeks of December; Alice searching for clean streams from which to collect micro-caddisflies, Cees for lowland forest for braconids. We now understand why there are few Balinese representatives of these groups in museum collections.

In December, Jenni Webber spent a week with the arachnologists at the Australian Museum identifying some of her expanding collection of Top End spiders.

The Museum now has two malaise traps set permanently; one at Berry Springs in monsoon forest, and the other in an area of woodland unburnt for 12 years (a rare find) at Humpty Doo. If anyone is interested in material from these we will sort it out for them. Already, Gunther Theischinger has recovered some interesting tipulids from the samples from Berry Springs.

Visitors to the Museum included David Rentz (ANIC) and Lyn Lowe (CSIRO, Darwin) to look at Orthoptera. David rearranged some of our more creative sorting of specimens. In early January, Max Moulds delighted Darwin's Sunday drivers with a display of his tree climbing skills in a suburban park as he successfully captured his first specimens of *Macrotristria doddi*. He left us with a richer and better-sorted cicada collection.

Dan Bickel's visit overlapped with that of Max and Barbara Moulds and we were all able to share the agonies of the thick clouds of insects at Max's football oval type lights one evening at Berry Springs. Dan was more furtive with his trapping methods, tucking yellow "Batman" breakfast bowls into the undergrowth to trap dilochopodids. It was a considerable relief that he was not noticed by the saurian inhabitants of the East Alligator River as he attempted to make his own mud slides in off the bank.

Office of the Supervising Scientist - Alligator River Region Research Institute

The Biological Monitoring group is ticking over as per usual. Peter Dostine and Chris Humphrey have returned from recreation leave in Hawaii and Singapore respectively. Some lucky members of the group are preparing to monitor a release of waste water from the closed Nabarlek mine in Arnhem Land. They may have some waiting to do - the monsoon (and hence high creek flows) is not expected till mid-February. The section enjoyed flying visits from Lyn Lowe (CSIRO, Darwin) and more recently from Alice Wells and Dan Bickel.

DPIF - Entomology Section

Activity in the section is slowing down with the end of the growing season. At this stage only one vegetable grower being monitored for export certification is still free of *Thrips palmi*. The dreaded thrips has also been recorded in one nursery. The results of fumigant trials for disinfestation of nursery stock are not encouraging. Stuart Smith spent six weeks over the Christmas period in USA.

DPIF - Quarantine and Inspection

Surprise, surprise - Hermes Perona is back as NAQS Plant Science Officer, having re-appraised current opportunities for furthering his studies. He attended a meeting of NAQS Plant Science personnel in Cairns in January.

Ted Fenner, along with John Turner of QDPI, spent November in Indonesia on the first of a planned series of joint surveys of crop pests in Irian Jaya under the NAQS program. Due to administrative difficulties, field work was possible only in the Jayapura area, but numerous pests were collected including several targeted species.

S.E. QUEENSLAND

Lands Department, Alan Fletcher Research Station

Rachel McFadyen has received quarantine approval to release the cochylid stem-borer, *Platphalonidia mystica*, into the field for the biological control of parthenium weed. Rachel and colleagues Brian Willson, Graham Donnelly, Allen Tomley and John Cronin are attending the 8th International Symposium on the Biological Control of Weeds at Canterbury, New Zealand from 2-7 February.

Judith Melksham is attending the 23rd AGM and Scientific Conference of the Society at Hobart.

Queensland Forestry Service

Ross Wylie and Judy King will be visiting the Longreach region on 19-24 January to examine insect problems in eucalypt plantings at the Arid Zone Institute and on several nearby grazing properties. They will also investigate cases of native tree dieback near Winton and along the Condamine in the Roma-Dalby area.

Queensland Institute of Medical Research

Brian Kay was invited to participate in a special session of the American Committee on Medical Entomology within the 40th Annual meeting of the American Society of Tropical Medicine and Hygiene in Boston, 1-5 December. From the first winter snow of Boston, he then escaped to sunnier climes in Brazil to continue field work on *Aedes aegypti* surveillance and control. From 26 January-15 February Brian will be in Fiji on a US-AID consultancy, reviewing and modifying *Aedes aegypti* surveillance and control strategies.

University of Queensland

A farewell dinner was held in the Baan Thai Restaurant on 4 December to mark the retirement of Professor Hugh Paterson as Head of the Department of Entomology. Over 100 people attended, including some of Hugh's ex students (see photo). Messages of congratulations were received from all points of the globe and ex students Gimme Walter, Tony Clarke and Dave Lambert gave thanks to Hugh for being both teacher and friend, while Max Whitten paid tribute to Hugh's contributions to science. Hugh has been granted Emeritus Professor status and will hopefully be a familiar sight around the Department. Meanwhile, Myron Zalucki is acting head until a replacement is nominated.

Martin Rice and his wife Angela were hosted by Dr Jenny Dymock of DSIR, Mt Albert Laboratories, Auckland, New Zealand from 5-17 January. The new sheep blowfly lure - "Lucilure" - was tested at several sites and found to be effective on kiwi *Lucilia sericata* and *cuprina*. The lure is being commercialised by a cooperative group of QDPI and UQ researchers including Dr Rudolph Urech, Mr Peter Green, Mr Philip Webb and Martin Rice. Martin and Angela are full of praise for the excellent hospitality received and the high quality of entomological research at Mt Albert and at Ruakura (MAF) where Martin also presented a seminar on "Misbehaving insects - the future for insect pest management?". Further cooperation of blowfly trapping across the Tasman is planned.

At Hugh Paterson's retirement dinner (L to R): Dave Lambert, Gimme Walter, Hugh Paterson, Shirley Paterson and Max Whitten.

Much recent progress has been made with commercialisation of azadirachtin, an insect control agent from neem (*Azadirachta indica*) seeds. An Australian patent (599569) has been granted and the first product "Liceguard", a human head-lice control agent has been registered under the Therapeutic Goods Act. Other products for use against dog and cat fleas, crop and garden pests etc. are being experimentally trialled. Details of trial results and samples of neem are available from Martin Rice, Department of Entomology, University of Queensland.

Visitors to the Department included Dr Gisli Mar Gislason from Iceland and ex student Scott O'Neill from Yale University's School of Medicine.

CSIRO, Long Pocket

Peter Room has been awarded the inaugural CSIRO Chairman's gold metal for scientific excellence in the project that resulted in successful biological control of salvinia. The $25,000 cash prize will be shared among the other team members; Ken Harley, Wendy Forno, Don Sands, Mic Julien, John Whiteman, Richard Chan and Martina Schotz. Ken Harley, Wendy Forno, Mic Julien and Tim Heard will attend the 8th International Symposium on the Biological Control of Weeds at Canterbury, New Zealand from 2-7 February.

Wendy Forno returned from an overseas visit in Late November carrying individuals of an undescribed species of *Apion* weevil collected on the flood plain of the Orinoco River in Venezuela. Release of this species against *Mimosa pigra* is planned in future. Dr Banpot Napompeth, Dr Wiwat Sua-Saard and Ms Pimpun Sommartya visited Long Pocket Laboratories for one week during December as part of ACIAR programs on water hyacinth and *Mimosa pigra*.

Water hyacinth is spreading in PNG. Mic Julien paid a visit to assess the situation in early December. It is a serious problem in Central Province (Moresby area) and on the Sepik River, which was only recently saved from a crippling salvinia infestation. There are plans to approach AIDAB for funds to mount a joint biological control project involving CSIRO and the PNG Department of Agriculture and Livestock. This would involve redistributing *Neochetina eichhorniae* which is established in some areas and importing two other agents, *N. bruchi* and *Sameodes albiguttalis*, from Australia.

Centre for Tropical Pest Management

Dr Geoff Norton from Imperial College Silwood Park has been appointed Director of the CRC and will take up this post in March

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Des FOLEY
Regional Councillor

QDPI Entomology Branch

Neil Heather's (Indooroopilly) fresh fruits disinfestation group were visited during January by the following ACIAR sponsored people: Udorn Unahawutti, Department of Agriculture, Thailand; Wilhemina Santos, Bureau of Plant Industries, Manila and Isabello Pelacio, University of The Philippines, Los Banos.

Frank Page (Applethorpe) reports that he has been recording apple dimpling bug from various introduced and native hosts. With regard to the integrated mite control project, the mite scout Mr S. Scalora is confident that most growers will stay with IMC even when the new miticide "Pyranica" is registered. A field evaluation of a commercial granulosis virus for control of codling moth is under way - results have been variable.

Visitors on short stays (2-6 months) to the Toowoomba laboratories include:

- John Wightman of ICRISAT Patancheru, India who is working on a damage model for scarabs in peanuts with John Rogers and Hugh Brier, Kingaroy;
- Berthold Hennecke, an International Agricultural Student of Kassel University in Germany, is spending two months as part of a course requirement for six months overseas experience;
- Ann Marie Cooper and Beth Black from the University of Guelph, Ontario, who were working on biocontrol of the Colorado potato beetle and are spending three months of a working holiday with Brad Scholz on *Trichogramma*.
- Nigel Armes, also of ICRISAT, who will be visiting in February to discuss insect resistance management and heliothis ecology.

Rod Elder (Rockhampton) is attending the Australian Entomological Society 23rd Conference and AGM in Hobart in early February. He will present a paper titled "Papaws, Oriental scale and three parasitoids".

Bernie Franzmann, David Murray and Brad Scholz (Toowoomba) will be attending the 2nd Australian Sorghum Conference at Gatton in February. Dave will be going later to Lorne, Victoria to address the IAMA Conference on IPM.

Gordon Simpson (Toowoomba) reports that the big drought reduced soil fauna populations but seemed to increase sightings of less common species.

With the onset of the wet season (though not as wet as usual) Judy Grimshaw (Indooroopilly) is commencing survey work in the far north of Queensland. During the February visit to the Torres Strait she will examine the new quarantine facilities provided on Thursday Island, including an insectary and some laboratory space, and visit the spiralling whitely on Boigu Island.

John Turner (Indooroopilly) will spend four weeks in Eastern Indonesia during February and March as part of the NAQS survey work. This visit follows on from a successful survey of pests of mango and cocoa late last year in company with Ted Fenner.

Bernie FRANZMANN
Regional Councillor

NORTH QUEENSLAND

Tom Weir and Ian Naumann (ANIC, Canberra) took part in the initial stages of the Royal Geographic Society expedition to northern Cape York Peninsula.

Max and Barbara Moulds passed through north Queensland as part of their latest collecting trip to northern Australia. While in Kununurra, north Western Australia they unexpectedly ran

into Ross Storey (Mareeba, Qld) who was spending two weeks with Geoff Strickland collecting beetles.

Hermes Perona (Darwin) visited Mareeba as part of a NAQS planning session. He also found time to talk beetles with Ross Storey.

Ross STOREY
Regional Councillor

NEW SOUTH WALES - Metropolitan

Sydney University - Medical Entomology, Westmead Hospital

The NSW Arbovirus Surveillance Program has been refunded for the 1991/92 season with Peter Wells and John Clancy continuing on with the program. The current mosquito season has generally got off to a slow start with below normal mosquito catches from many of the trap localities for the period from October until late December and correspondingly very few mosquito-borne viruses were isolated from the mosquitoes processed.

Professor Gisli Mar Gislason from the University of Iceland, Reykjavik, left Australia on 16 January after his six month sabbatical with us; he will be missed by all at Westmead.

Peter Wells spent a few days in Griffith in mid-January collecting mosquito larvae and adults for vector competence studies.

Richard Russell conducted a course on mosquito biology, identification and control for health surveyors and environmental health officers of the NSW Health Department and municipal authorities, at Coraki on the north coast in November; Merilyn Geary, John Clancy and Stephen Doggett assisted.

CERIT (Centre for Entomological Research and Insecticide Technology), University of New South Wales

CERIT, via its Director Chris Orton, has had some good media coverage over the past months; these included nine radio interviews, an article in the Australian newspaper and a segment on Channel 9's "Burke's Backyard". All were concerning industry funding of insecticide and insect control research and development.

While most of the CERIT staff took Christmas leave, the arrival of new son Dallius for staff member Belinda Wilson was a late Christmas present.

Julie-Ann Short has returned to work part-time at CERIT after a year away (when she produced baby Stephanie) to assist Jenny Anderson on the buffalo fly project just getting under way.

We very much enjoyed the visit of Richard and Shelagh Wall from Bristol University, UK. Richard gave a seminar on *Lucilia sericata* attended by 20 people and he, Shelagh and Jenny Anderson travelled the 1100 km on the Indian Pacific to visit Fowlers Gap Research Station and Mootwingee National Park where Lynette McLeod is carrying out kindred investigations on sheep blowflies, in rather different environmental conditions from those in Britain! Lynette soon leaves for Tasmania to go to the AGM, the only CERIT person able to get away.

Other visitors included: Mavlab veterinarian Frazer Galloway; James Cook University Tutor Debbie Rae; John Ardley, Technical Manager for Pesticides at Neville J. Webb Pty Ltd; Stuart Doyle, Geotechnical Engineer with PPK consultants; Bill Farnsworth, Agrisearch Ltd; Michael J. McQuillan, Director, Dunluce International Pty Ltd; Enzo Cassagrande, Product and Development Manager, Agrisense Pty Ltd; Steve McGuiness, Samuel Taylor Pty Ltd; Ian Simpson, NSW Agriculture, Goulburn; and Prof. John Madden, School of Agriculture, University of Tasmania.

Macleay Museum, University of Sydney

The Museum was nearly buried in insects this past year. Nearly 15,000 were mounted (12,500 were pointed), all coming from donations from overseas and Australian material (all mounted by the curator!). The extensive Tom Gush collections are of special interest because they consist of mostly small beetles and all collections are accompanied with ecological information. Financial support for the Invertebrate Unit was at an all-time low in 1991 and Woody Horning will have to restrict donations in future because of the lack of cabinets, unit trays and pins.

The most important news to entomologists is that the recommendations resulting from an enquiry into the Macleay Museum and the historical, cultural and scientific collections within the University of Sydney were released in December. Recommendation 8 was a real blow to Woody - "That the major biological collections of both invertebrates and vertebrates be largely transferred to national research institutions for greater research accessibility and more appropriate storage facilities...". He will keep people informed on the progress or lack of progress on this recommendation. Woody would like to hear from other entomologists on what they think should be done with the historic and largely foreign insect collection held by the Macleay Museum (about 600,000 specimens in 60 cabinets).

NSW Agriculture - BCRI, Rydalmere

Howard Greening, our specialist in pests of grain (particularly on-farm storage) and stored foodstuffs, retired in November after 27 years with the Department. A farewell lunch was held at the Institute and Howard was presented with an antique phonograph by the staff. Howard's research on the development of alternatives to maldison for controlling stored grain pests and the use of pyrethrum for protecting farm stored grain are notable achievements of his time in Entomology Branch.

A major review of the structure of the Department has resulted in a more prominent position of BCRI within the Department. We have now become part of the Division of Plant Industries with the Director of the Institute position also being Deputy Chief of the Division.

At the time of writing the selection process for filling the position was still underway. We are, of course, hoping for an entomologist!

Graeme Baker has been kept busy with outbreaks of the Australian Plague Locust on the Northwestern and Central Western Slopes and Plains and Graham Goodyer with outbreaks of *Mythimna convecta* and ground pearls.

Murray Fletcher has started on his ABRS-funded project sorting out the Australian Deltocephalinae with Angie Condello appointed to assist. First priority is to establish lectotypes for the Kirkaldy species and locate types for the species not described by Kirkaldy or Evans.

Graham Brown has been visiting Gus Campbell at Armidale on a regular basis. Gus and Graham have a RIRDC grant to examine the distribution of scarab parasites (Tachinidae, Tiphiidae and Scoliidae) in relation to remnant vegetation stands in the New England area. (This sentence has been inserted as a deliberate error for the previous editor to find).

Vic Edge, Murray Fletcher and Mary Ann Terras attended the launch of the new Insects of Australia in Canberra in November and Murray also attended the Biological Collections workshop in Canberra and visited Geoff Monteith and QDPI in Brisbane later in the month.

Alan Clift presented a paper at the 9th Biennial Conference on Modelling and Simulation (not modelling and stimulation) in December at Coolangatta.

Daniel Burckhardt, from Geneva, visited Murray Fletcher in January to look through the Peloridiidae held in the J.W. Evans collection and to sort through the Department's collection of Psyllidae.

Australian Museum, Entomology

Since December Max and Barbara Moulds have been away on their annual collecting expedition, this time to northern Australia. Although conditions were generally dry, Max had found the cicadas he was looking for. Max's Master's Degree seminar at Macquarie University was a success, and we look forward to a speedy conclusion to his thesis research.

In January Max and Barbara were joined briefly by Dan Bickel who was in the Territory hunting for dolichopodids. Alice Wells also joined the team for a few days. In November Dan also had a good trip to W.A.

Courtenay Smithers is currently busy with three research projects: a revision of spongilla flies (Neuroptera: Sisyridae); the psocoptera intercepted by quarantine officers, mainly from Sydney airport; and the Psocoptera collected from Tuglo Wildlife Refuge, near Barrington Tops. The latter is part of a wider survey of the fauna and flora of the Refuge.

Shane McEvey's editing of the works on species biology by Hugh Paterson has kept him busy over the last six months. Publication of the book by The Johns Hopkins University Press is scheduled for later this year. In December and January collecting trips with Eren Turak, Luke Collins and Julie Virtue to the Tooloom and Richmond Range rainforests in north eastern NSW yielded nearly 50 species of drosophilid flies; the distributional records will be incorporated in the NPWS North East Forest Fauna Survey reports. Further south in the Sydney region his work on species in urban and non-urban habitats approaches a peak in the last half of summer. With colleagues in Europe Shane is maintaining a flow of taxonomic papers describing material he collected in Madagascar and southern Africa.

Gerry Cassis runs the speaker program at the Museum. His guests over the last several months have included: Dr John Collier from the Department of History and Philosophy of Science at the University of Melbourne, on natural classifications; and Dr Richard Vane Wright from the Natural History Museum, London on the development of software for identifying areas that, if conserved, would maximise species diversity. The package, called WORLDMAP, offers much to those involved in environmental management and analytical GIS work. Gerry and Shane are participating in March in the Cape York Peninsula Scientific Expedition organised by the Royal Geographical Society of Queensland.

Henry Disney, cousin of ornithologist John Disney, expert on phorid flies and scholar from Cambridge, paid us an informal visit in December.

Volunteers and students are playing a vital role in the department. Eren Turak is sorting and curating Diptera for Dan, David and Shane and helping in the field. Julie Manning is also sorting and curating. Julie Virtue makes steady progress with her paintings for a butterfly book.

Ryde School of Horticulture

Professor Don Dahlsten of the University of California, currently on sabbatical leave at the Keith Turnbull Research Institute, Victoria, visited Graham Young during November and December. While in Sydney Don collected parasitoids and predators of the pimple psyllid, *Trioza eugeniae*, which has become a serious pest of ornamental *Syzygium* species in California. Don reports that the first shipment of parasitoids and predators has arrived successfully in California.

Macquarie University, School of Biological Sciences

The Fly Farm has commissioned its new automatic feeder and waterer, designed by PhD student Duncan Craven. Duncan is further revolutionising the *Drosophila* business with his electric pooter, about to be field-tested on the flies in the Hunter Valley wineries. (What a life these drosophilists lead!). The pooter has already proved its utility in ant collecting - Lou Rodgerson has been excavating ant nests and found the electric pooter saved her from the diet of sand and dust that usually accompanies ant collecting. The Fly Farm has a new PhD student, Lynne Woodworth, who will be modelling conservation genetics problems.

The aphid group is about to be expanded by the addition of a post doctoral Research Associate and a part-time technical officer on ARC funding. Meanwhile, Eren Turak and Lilian Blanco continue with their thesis work, and Dinah Hales has interspersed preparations for the AGM with acting as pit-crew at the National and State

Sabot Sailing titles. Ken Davey (York University, Ontario) spent a couple of days with Dinah in late November and brought her up to date on this laboratory's work with hormonal control of insect reproduction, as well as nematode physiology.

David Briscoe has just returned from study leave in the UK, Brazil and USA, where he covered a wide range of topics, but peripatus and PCR were fairly high on the agenda. One of the highlights of his trip was an early morning encounter with a jaguar in the Brazilian jungle. He discovered an unexpected ability to run very fast.

In Duncan Veal's laboratory, work has continued on the characterisation of the *Myrmecia* (ant, not news bulletin) metapleural gland secretion and most of the biological work is now ready for publication. The chemical characterisation has hit some technical problems but promises an interesting story when complete.

Andy Beattie's laboratory is busy as usual. Dr Hall Cushman leaves this month to join Professor Paul Ehrlich in USA. Pam Gratton is doing her honour's project with Kay Watson on Ant Colony Demography.

John CLANCY & Shane MCEVEY
Regional Councillors

NEW SOUTH WALES - Country Areas

Agricultural Research & Veterinary Centre, Orange

Uncharacteristically absent from the last edition of *Myrmecia*, Col Bower and Graham Thwaite are back in communication again. Their series of winter-spring meetings in 1991 ended with Col's participation in the first National Conference of the Australian Society of Horticultural Science held at Macquarie University, Sydney in October.

Once the travelling stopped, Col Bower launched the "mother of all" apple dimpling bug trials at Bathurst, part of a four-state onslaught on this native pest of apples. Meanwhile, Graham Thwaite has been tackling resistance problems in mites and codling moth. The latter work is in conjunction with Dave Williams, IPS Burnley, with assistance from others including Steve Sexton, Warwick, Queensland.

Already established as the resident authority on native orchids, Col has extended his expertise to non-cane toads. He "bailed-out" a very pregnant Giant Banjo Frog which had been wrongfully "arrested" as a cane toad by Orange police and placed in the local lock-up.

Former Orange and Rydalmere entomologist Norman Lloyd visited Orange in late January as a guest at the official opening of the head office of NSW Agriculture.

Agricultural Research Centre, Tamworth

The Biological Control of Weeds group at Tamworth (John Hosking, Royce Holtkamp and Paul Sullivan) are attending the VIII International Symposium on Biological Control of Weeds at Lincoln University, New Zealand, 2-7 February. The group is presenting papers and a poster on biological control of broom (*Cytisus scoparius*), *Cassinia* spp. and a cactus (*Opuntia vulgaris*). Following the conference, John, Royce and Paul are participating in the three-day post-conference tour, looking at weeds of high rangeland and conservation areas.

In September Robin Gunning received an award from the Australian Academy of Science to study *H. armigera* biochemical toxicology at Rothamsted Experimental Station, UK, in May/June 1992 (Australian Academy of Science/Royal Society Scientific Exchange Program).

Yanco Agricultural Institute

David James has become involved in two new research areas: Queensland fruit fly and *Carpophilus* beetles. A major Sterile Insect Release (SIR) program commenced at Cowra in mid-western NSW in an attempt to suppress the resident fruit fly population. Andrew Jessup of the Gosford Post-Harvest Laboratory of NSW Agriculture has been supplying the flies at a rate of 1-3 million per week. David reports that the project (which is being funded by HRDC, three state Departments of Agriculture and various horticultural industries) is providing a large amount of valuable information on SIR technology.

David James has also begun researching pheromones and attractants in *Carpophilus* spp., which are increasingly important pests of ripening stone fruit in southern Australia. Collaboration with entomologists in Illinois, USA, is already yielding some interesting data on the responses of Australian *Carpophilus* spp. to attractants and pheromones.

Richard Faulder visited the Australian Museum, Sydney for about two weeks prior to Christmas to continue his investigations of mouse spiders (*Missulena* spp.), including discussions with Mike Gray.

Richard FAULDER
Regional Councillor

VICTORIA

La Trobe University, Department of Zoology

Professor Robert Luck of the University of California at Riverside has arrived to work on the biological control of *Phoracantha semipunctata*, a phoracanthine cerambycid introduced from Australia (the common eucalypt longicorn). This beetle is killing a number of *Eucalyptus* trees in California, the Mediterranean regions and many other areas. He is working in association with Mr Wang Qiao, a PhD student under Ian Thornton and Tim New, who is studying Australian Phoracanthini. Qiao has been invited to Western Australia in January by the Department of Conservation and Land Management to discuss *Tryphocaria acanthocara*, which is killing healthy *Eucalyptus* trees in W.A. He will also visit museums in the area.

Jonathan Fell's MSc thesis on three Victorian scorpion species went through without problems.

Institute of Plant Sciences, Burnley (Department of Food and Agriculture - previously Department of Agriculture)

Paul Horne visited Mike Keller at the Waite Institute recently and together they investigated host searching behaviour by several species of potato moth parasitoids in Mike's wind tunnel. This was a very successful exercise and they hope to conduct more collaborative work in future.

A greatly relieved Garry McDonald had his PhD thesis "Phenology, ecology and movement of the common armyworm, *Mythimna convecta* (Walker) (Lepidoptera: Noctuidae), in eastern Australia" passed by La Trobe University in October 1991.

Professor Hugh Dingle visited Garry McDonald and presented a well-attended and fascinating seminar which gave life to the subject of the genetics of insect migration.

Museum of Victoria, Entomology/Arachnology Department

The "Skydancers - Butterflies of the World" exhibition continues to prove popular, so popular that it has been extended until August 1992. When Ken Walker asked if public demand for the exhibition had prompted its extension, the reply was "No - we can't afford to replace it"! Anyway, there are still people enjoying the exhibition.

Mr Graham Milledge recently joined the technical staff of the department for two years. His time will be solely devoted to duties concerning the Arachnology collection, as this section of the collection has for years received only maintenance curation. Graham is curating the bulk of the Australian collection through re-tubing, identification and computer registration.

Accessibility to the collection has been greatly enhanced, which is reflected in an increase in the number of loans processed. He has also begun training sessions on basic arachnid identification with the first course presented to Straun Sutherland's group at the Commonwealth Serum Laboratories. Additions to the Arachnology collection have been minimal over the last few decades so we decided to conduct a summer long trapping program in *Nothofagus* forest of the Otway Ranges. Three sites were chosen and collecting techniques include pitfall traps, direct searching, leaf and moss sampling and light trapping. Due to high rainfall in the area, pitfall traps are only open one week in four. Collections to date have been excellent for both arachnid and insect faunas. A summary of the major groups collected will be published later in the year and it is hoped specialists will borrow relevant material.

Recent additions to the insect collection have included the donation of a large aquatic collection from Mr John Dean and the museum is in the process of purchasing the David Holmes moth collection. Recent visitors to the collection include Prof. G.E. Scudder (Canada), Dr Kazuo Ogata (Japan) and Dr Bob Taylor (Canberra).

Museum of Victoria, Invertebrate Survey Department

It's been a rather hectic time over the last few months. Rhonda Butcher and Alan Yen are well into their overview of the conservation of non-marine invertebrates in Australia for the Australian National Parks and Wildlife Service. Both have been travelling around and meeting with relevant individuals and organisations, as well as attending the Conservation Biology Conference in Brisbane and the Biological Collections Conference in Canberra.

Field work still continues in several areas. Beverly Van Praagh has started on a survey of the invertebrates of the western region of Melbourne. This is a 12 month part time study funded by the Board of Works, the National Estate and the Western Regions Commission. Peter Lilywhite has been helping Graham Milledge in the pitfall trapping survey of invertebrates in *Nothofagus* forests in the Otway Ranges. Alan Yen went on a three week trip to the goldfields mallee of Western Australia; unfortunately the entomological finds were not great. Robyn Coy has been employed for nine months to undertake a survey of forest ground-dwelling invertebrates in East Gippsland.

Sunraysia Horticultural Centre - Plant Protection Section (Department of Food and Agriculture)

Greg Buchanan has been designated as a program leader for plant protection for the Sunraysia-Riverland region. Greg's extra task comes about from the decision of the Departments of Agriculture (NSW, Vic and SA) and CSIRO to establish multi-organisational research and service delivery programs across the four major horticultural centres in the Sunraysia-Riverland region. Four major programs were identified; the other programs and program leaders being Viticulture (Rob Walker, CSIRO), Citriculture (Ken Bevington, NSW) and Irrigation and Salinity Management (Gerry Davies, SA).

Grape phylloxera continues to spread in central and north-east Victoria, with another outbreak at Whitlands, a new vineyard established by Brown Bros to grow premium quality wine grapes. Greg Buchanan led a survey team to define the extent of the outbreak, which was confined to a small area of about 1 ha of ungrafted vines. Fortunately, most of the Whitlands vineyard is established on resistant rootstock and will not be affected by phylloxera.

Despite newspaper reports that misinterpreted control actions by Brown Bros, the main consequence of the outbreak is the establishment of a new quarantine area within 2 km of the infestation from which the movement of grape material is restricted.

University of Melbourne - Department of Genetics

1991 has seen a large jump in demand for Honours courses in the department, from 9 last year to 14 this year - just as well part of the building improvements during the summer break included increasing the capacity of the Honours Student area to 14 (to allow for future

expansion)! Nine of these students will be doing insect-based projects.

Jon Martin returned to field work for the first time in a number of years, to obtain material for the joint project with Charlie Webb and Pete Cranston. Collections were made around Brisbane in early October and at Gippsland at the end of the month. With Brisbane so dry, man-made habitats proved very useful, including the Griffith University artificial stream system at Atkinsons Dam (thanks to Brad Pusey). However, East Gippsland provided the surprise, with an apparently new chromosome race of the *Chironomus oppositus* complex. After 30 years of sampling Jon thought he knew all the species of south eastern Australia - and he hasn't finished studying the new species from Glen Osmond, South Australia that Chris Maddern produced at the Melbourne Conference last July!

Keith Turnbull Research Institute (Department of Conservation and Environment)

Peter Stephens has been transferred from pest animal research to work as a technical officer on biological control of thistles. Mark Gardner has recently been seconded to work as a technical assistant on biological control of boneseed and bitou bush.

Penny Edwards, an entomologist working for CSIRO in South Africa, visited Robin Adair in January to see and discuss the boneseed/bitou bush project.

Robin Adair and Rosamond Shepherd convened the third symposium on the control of environmental weeds, held at Monash University on 6-7 November, 1991. Robin has also received approval to introduce a boneseed/bitou bush leaf eating beetle, *Cassida* sp., into Australia. This beetle is now in quarantine and is undergoing host specificity tests.

John Weiss has just returned from the national underwater hockey competition in NSW where he represented Victoria. Unfortunately, the Western Australian abalone divers proved to be too strong and won the competition. John has also received approval to introduce a moth, *Pterophorus spilodactylus*, for biological control of horehound. The moth is currently undergoing host specificity tests.

Raelene Kwong has recently received a shipment of a tachinid fly, *Erynniopsis antennata*, which parasitised elm leaf beetle larvae. The fly is currently being tested to see if it attacks any native or important foreign chrysomelid species.

La Trobe - Genetics

New students and their research projects this year are: David CLANCY (postgraduate) working on cytoplasmic incompatibility in *Drosophila simulans*. He will be looking for maternally inherited deleterious effects and will be attempting to transfer the incompatibility factor to pest species; Richard WOODS (postgraduate) using *Drosophila* to look at coadaptation issues relevant to conservation genetics; Marcus WATSON (postgraduate) using *Drosophila* and *Heliothis* to look at adaptation to environmental stress via acclimation; DeAnne GLENN (honours) looking at presence of insecticide resistance in *Heliothis armigera* from corn in Victoria.

This year we have a new ARC grant to investigate adaptation via acclimation and heat shock proteins together with Steve McKeehnie from Monash University and a small ARC grant investigating cytoplasmic incompatibility in *Drosophila simulans*.

Janet HORNE
Regional Councillor

AUSTRALIAN CAPITAL TERRITORY

Australian National University

The entomology group at ANU will soon be expanding. John Balderson, under the joint supervision of Penny Gullan and David Rentz, will be undertaking a PhD project entitled "A systematic revision of the subfamily Paraoxypilinae (Mantodea) of Australia". Katie Strong will also be returning to Australia to pursue a PhD with Penny Gullan, Bruce Halliday and Dave Rowell. Katie will investigate the systematics and host-parasite relationships in the mite genus *Psoroptes*. Former student Chris Reid has successfully completed his ERIN project and is starting a new ABRS-funded systematic study of the Chrysomelinae.

Dr Gillian Watson, from the International Institute of Entomology, The Natural History Museum, London, is visiting Penny Gullan at ANU. Gillian is investigating the identity and country of origin of the pine woolly aphid, a major pest of pines. Her work in Australia is part of a broader study on the biocontrol of conifer aphid pests taking place in California, Hawaii, New Zealand and Malawi. Early results, based on morphological, cytological and biochemical analyses, are encouraging and indicate that there may be two species of woolly aphids in Australia.

CSIRO - Australian National Insect Collection

The ANIC has had a number of visitors recently. After the Academy of Science's Biological Collection meeting, Peter Raven of the Missouri Botanical Garden and Dick Vane-Wright of The Natural History Museum, London, both paid a visit. Peter discussed collection management and support, while Dick worked on various papers with Peter Cranston, examined butterflies, and gave a well-attended seminar on his new computer-based biodiversity conservation expert system, WORLDMAP.

Several other visitors have given seminars as well. Gareth Nelson of the American Museum of Natural History, New York and Pauline Ladiges of the School of Botany, Melbourne University, presented a talk on the use of three taxon statements in systematics and biogeography. Although there was no strict consensus on the utility of their methods, several in the audience took the opportunity to try their new computer implementations of the methods using their programs, TAS and TAX. Dr David Ride (Geology Department, ANU) presented an overview of proposed changes to the International Code of Zoological Nomenclature.

The Hymenopterists have had several visitors recently. Andy Austin and Paul

Dangerfield, both from the Waite Institute, Adelaide, stopped by to have a look at braconids with Ian Naumann and Jo Cardale, and to confer on artistic matters with Se Kim. Patricio Fidalgo, from the Fundacion Miguel Lillo, Tucuman, Argentina, visited to discuss mymarids and hymenopteran morphology with Ian Naumann and Steve Shattuck. Maryati Mohamed (National University of Malaysia) and Elsa Dexter (University of New England) also visited to have a look at the ant collection.

Lepidopterist Ian Common visited from Toowoomba to select oecophorid moths to illustrate the first volume of his "Oecophorid genera of Australia". Niels P. Kristensen, of the Zoological Museum, Copenhagen, visited for a week to discuss the Lepidoptera section of the upcoming "Handbook of Zoology" with contributors Marianne Horak and Ebbe Nielsen. Niels also discussed book editing techniques with Ian Naumann. Daniel Burckhardt, from the Natural History Museum in Geneva, consulted with Keith Taylor on Australian psyllids. Daniel also took the opportunity to utilise his expertise with a Winkler sac to collect not only psyllids, but also Peloridiidae and Pselaphidae.

Several long-term visitors to the ANIC have recently departed. Yayuk Suhardjono finished her research on Collembola with Penny Greenslade and has returned to Bogor, Java and Jurgen Otto has completed his studies on anystid mites and headed back to Germany. Both report great success and hope to return for further work.

The coming of summer has increased insect activity and with it the number of collecting trips. John Trueman spent a week in early January driving every road in Victoria in search of odonates, especially *Hemiphlebia*. Ted Edwards and Steve Shattuck spent a week at the Brookfield Conservation Park continuing the work others in the ANIC started early in the spring. Geoff Clarke, Marianne Horak, Ian Naumann and Ebbe Nielsen worked in Tasmania to complete the year-long WEBS study of the insect fauna of the Pelion Valley and Melaleuca-Bathurst Harbour. The project has resulted in a tremendous increase in our knowledge of these areas. After her return, Marianne took the opportunity to join Daniel Burckhardt for a week of collecting on Lord Howe Island. Marianne reported both good collecting and great scenery. Ian Naumann and Tom Weir are off to Far North Queensland to take part in the Heathlands collecting expedition. They should be well equipped for the adventure, as about half a ton of collecting supplies were shipped north for their use.

Overseas travel has decreased significantly since the last report with most people enjoying the Australian summer rather than the northern hemisphere winter. Ebbe Nielsen did brave the cold to briefly visit Denmark where the International Faculty of the Danish Research Academy met to discuss Danish research education (at the PhD level) and its relationship to the international scientific community. Steve Shattuck visited the University of California, Davis and the Los Angeles County Museum, to consult with colleagues and help Los Angeles sort their ant collection. Both report much progress on their projects and both had a generally enjoyable time, although Steve says he'll take Australian air over L.A. soup any day!

Several people are nearing publication of major sections of their research. Elwood Zimmerman reports that the second colour plate volume of his "Australian Weevils" has passed the proof stage and will be available during February. David Rentz notes that the second volume of the "Australian Katydids" is about ready for the printers. The series is now scheduled to be completed in six volumes. Ted Edwards is nearly finished with the largest family in the Lepidoptera Checklist, the Noctuidae. He is now working on the final subfamily, the Nolinae. Finally, Geoff Clarke is busy putting together the first issue of the ANIC News which should hit the streets during February.

Some new faces have recently appeared in the ANIC, and several reassignments have taken place. Wendy Lee and Jonathan McCabe have been appointed to assist with the databasing activities until February while Tracy Harwood is on leave. Alison Roach has joined David Rentz and will be working on katydids. Alison's work with Ian Naumann and Jo Cardale on Hymenoptera and the Tasmanian WEBS material has been taken over by Kendi Davies. Finally, Leanne Regan will commence working on oecophorid moths to help support the work of Ian Common.

Steve SHATTUCK
Regional Councillor

CSIRO - Division of Entomology

One would expect little news with the silly season and all, but it seems that entomologists follow their insects into the field, despite the festive season.

Tony Watson, Sil Runko and Vance Brown headed off to W.A. for a week in December to find good sites for termite trials. Brian Fletcher headed to Townsville to meet with Mary Lou Johnson on leucaena psyllid and Don Sands to do some field work on fruit-piercing moth. Roger Farrow has had several trips south, variously looking at lerps on river red gums, fir blight beetles on black wattle plantations and assorted other species on plantation eucalypts.

Les Readshaw has been working on twospotted mites on hops over the last four years on money from the HRDC and the hop industry. As the mites are the only important pest in Australia and are not introduced pests as they are for other crops, he has been studying the ecology and natural enemies of the mites in hops, and ways that the mites and predators can be managed with selective sprays to prevent damage. Les is at the stage of formulating recommendations and is therefore spending a lot of time in Tasmania and in the Ovens Valley of Victoria in the hop fields.

The exposure of entomology in the media continued, on TV with Russell Moran about spiders, in the press with Les Readshaw on phylloxera, and on radio with Marina Tyndale-Biscoe on dung beetles, Roger Farrow on Christmas beetles and Gaye Weller on control systems for flies.

Andrew Moore has accepted a position within the Centre for Tropical Freshwater Research at

James Cook University in Townsville, to work with Joe Balciunas on the biological control of the Australian *Melaleuca* weed problem in Florida. For the past 16 years he has been involved in the biological control of skeleton weed, tansy ragwort, Paterson's curse and common heliotrope. Lately he has been the Safety Officer for the Division as well. All the very best Andy.

Andy Sheppard has arrived from the Montpelier laboratory in France to take charge of the Boraginaceae group in biological control of weeds. Welcome Andy. Paul Jupp has recently found the first signs of *Aculus hyperici* attack on St John's wort in the field at Beechworth. The mites have established at earlier release sites and things are looking promising for a decline in the weed. Tim Woodburn and Anthony Swirepik made the first releases of the seed-head fly, *Urophora soltitialis*, against nodding thistle in early December. The weeds section will be fairly bare in February, with Jim Cullen, Tony Wapshere, Andy Sheppard, Tim Woodburn, Paul Jupp, Penny Edwards (back briefly from Cape Town, South Africa), David Briese and Siraj Hassan (both from the Montpelier laboratory) all at the VIII International Symposium on Biological Control of Weeds in New Zealand, followed almost immediately by the First International Weed Control Congress in Melbourne. Sharon Corey has been very busy with the organising of the Fifth Australian Applied Entomological Research Conference to be held in Canberra in April.

Ray Akhurst has recently started two students. Liao Chunyan is from China and working on her PhD at the ANU, on the resistance to *Bacillus thuringiensis* in *Heliothis*. Ray Duell, also from the ANU, is doing his honours project on specificity determinants of *Serratia proteamaculans*, a disease organism of the New Zealand grass grub.

The nematode group is hosting visitors from China on the ACIAR nematode project. Wang Jinxian is doing his PhD research on the population dynamics of two entomopathogenic nematodes. Liu Xiu Ling, Cao Li, Yang Huaiwen and Xhang Shangao are here for six months doing experimental work on field efficacy, mass rearing, processing and storing of nematodes.

Robin Bedding is tremendously excited about the *Sirex* nematode work. The work revolves around replacing the old strain of the nematodes that has lost much of its ability to infect *Sirex*, with a new, more effective strain, and tracking the dispersal of the latter.

Richard Milner is happy to report that the proceedings of the recent *Bacillus thuringiensis* workshop are in final editing and will be available mid-February or so. If you didn't attend the workshop but would like a copy, contact Richard (there will be a charge).

Wendy Milne has become an honorary member of stored grain, as she is spending most of her time doing quality assessments on wheat samples from her recent field trials, in the laboratory of Tal Ghaly, recently arrived from the Highett laboratory. Phil Gibbs, another recent arrival from Highett, is an engineer and works on aeration controllers. Jane Wright has donned her dung beetle hat again briefly, and with help from Rose Broe in Brisbane is busy finishing work on African predacious dung beetles.

Dr Junichi Kojima from the Ibaraki University, Japan is visiting Australia for six months as a guest of the Australian Academy of Sciences. He is a specialist on the behaviour of paper wasps, and has collaborated with Philip Spradbery in the past. On this trip he will be spending most of his time at Atherton, Qld, studying social behaviour in swarm-founding *Ropalidia*, but will be based in Canberra until the end of February.

Bruce Champ has been busy organising the upcoming International Working Conference on Stored Product Protection to be held in Canberra in 1994. From all accounts, it's going to be a winner.

Ann Hastings, illustrator extraordinaire, has returned from her long service leave trip to Europe and is delighted to report that there are no insects in Europe, at least, she didn't have to draw any!

David Dall reports that for the last few months he's not been anywhere or done anything "exciting", just been writing papers, doing benchwork and basically being a happy scientist. Lucky fellow. Matt Greenstone, USDA-ARS Columbia, spent a month here again, this time working in Stephen Trowell's laboratory on immunological detection of predation.

Australian Plague Locust Commission

Everyone has been so busy checking on and controlling swarms of plague locusts in the Quilpie, Narrabri, Springsur-Alpha, Chinchilla-Dalby and Goondiwindi-Dirranbandi areas, that your correspondent couldn't catch up with anyone to get the news!

Australian Defence Force Academy

Alistair Drake reports that he has survived his first year as a lecturer in the Department of Physics, but more exciting has been the construction of a prototype Vertical Beam Insect Monitoring Radar or "VBIMR". Test transmissions began in December and the first recordings of insect echoes were acquired 16 January, this with all the equipment sitting out in the open air. Next is to install the radar at the Department's field site near Canberra airport.

Recent visitors to the department have included Matt Greenstone (USDA-ARS, Columbia), Myron Zalucki (UQ), Peter Gregg (UNE) and Hugh Dingle (University of California, Davis). Garry McDonald (Vic Department of Agriculture) called in on the day scheduled for a major VBIMR test and found himself helping out at the field site until well into the night. Sun Yajie (Gongzhuling) and Shao Zhenrun (Beijing) visited in November during their Australia/China Agricultural Cooperation Agreement "Armyworm Mission" tour, coordinated by Alistair.

Wayne Rochester (CSIRO, Entomology) visits regularly to discuss his continuing analysis of radar observations of *Helicoverpa* and *Mythimna* flights made with the CSIRO Entomological Radar. Chunshi Cui, who has assisted with data analysis since 1987 (initially with CSIRO), concludes employment at the end

of January, her task finally (almost!) completed. Chunshi is close to submitting her PhD thesis (in physics) to ANU, where she will shortly be taking up a postdoctoral position.

Jane WRIGHT
Regional Councillor

WESTERN AUSTRALIA

Curtin University, W.A.

Jonathan Major reports very little extra-curricular activity on account of the time taken in preparing for the AGM. Tony Postle continues into 1992 as a research associate with the arboreal insect project. He spent Christmas day working near Kununurra on the insects associated with the Argyle Diamond Mine Project. Jonathan attended the workshop on "Biodiversity and Ecological Functioning" at CSIRO's Division of Wildlife and Ecology, Helena Valley and presented a paper on restoration and maintenance of biodiversity. Anne Scougall has completed her Honours project on edge-effects in wheatbelt remnants. She is now taking a three month break working for the Environmental Protection Authority on criteria for conservation *vs* allowing for clearing of remnant vegetation. After this she returns to Curtin to commence a PhD project on restoration of biota in revegetated areas in the wheatbelt.

Agriculture Department, W.A.

A herd of entomologists invaded Kevin Richards' house to help him celebrate his retirement. Kevin organised a "Polynesian night" with the appropriate menu and entertainment. Many retired entomologists were also there so it was a good opportunity to catch up with them. Chief Entomologist Nic Monzu was in the spotlight, dressed in a grass skirt, performing a Polynesian dance.

The proceedings from the redlegged earth mite and lucerne flea workshop have been published and are available from the Department of Agriculture.

ICI, W.A.

Although John Sandow is mainly involved with the development of herbicides, he still maintains an interest in entomology. He will be attending the ICE in China, later this year and hopes to catch up with a few people there.

CSIRO

Visitors include Geoff Foster, who spent some time talking about blowflies on his way to Malaysia. Jenny Edwards stopped over in Perth to discuss weeds with John Scott, on her way from South Africa to the weed conference in New Zealand. Dr Mike Morris completed three months work with John Scott. He came from the Plant Protection Research Institute in Stellenbosch and was looking for biological control agents against *Acacia cyclops*, which is a serious pest in South Africa. Tony Watson spent a week in Perth to collect *Coptotermes acinaciformis* and do some taxonomy work on them. He also spent two days with Peter Davis and John van Schagen (APB) to look for trial sites to set up chemical and physical barriers against *Coptotermes*.

Agriculture Protection Board, W.A.

In the last couple of weeks three European wasp nests have been found and destroyed. These were found after reports from members of the public. The APB has been spending a lot of time in making the public aware of this pest, and it seems to be paying off. Hundreds of telephone calls have been received over the last few weeks reporting European wasps, but 99.9% of these turn out to be the common papernest wasp.

John van SCHAGEN
Regional Councillor

TASMANIA

Queen Victoria Museum, Tasmania

Volume 8 of the Zoological Catalogue of Australia, covering the Non-Marine Molluscs, was officially launched by Don McMichael on 30 January. The Queen Victoria Museum was chosen because the author, Dr Brian Smith, formerly Senior Curator (Zoology) at the Museum of Victoria, has recently taken up residence in northern Tasmania. Others in attendance for the launch, and taking their first look at the Queen Victoria Museum, were Drs Jean Just and Keith Houston of ABRS and Dr Ebbe Nielsen from ANIC.

Brian Smith has been appointed Honorary Research Associate of the Museum in recognition of the work he has carried out on curating and databasing the Museum's mollusc collection (lots so far), and in anticipation of his on-going involvement with the mollusc and echinoderm collections, education and invertebrate survey. Brian has secured an ABRS grant, the first to be held at the QVM, to carry out taxonomic studies of Charopids.

Going back to last year, Tim Kingston had a most enlightening and enjoyable period of study leave with Professor Barrie Jamieson at the University of Queensland in November. There appears to be plenty of work still to be done on Tasmanian earthworms - only one of eight species Tim dissected in Brisbane is among the 48 species listed by Barrie Jamieson for Tasmania in 1974. Tim returned to Launceston well placed to embark on his own studies of Tasmanian earthworms, to the welcome news that his request for funds from the National Estate Grants Program, for that very purpose, had been successful. He will shortly be looking for a broad-shouldered zoology graduate, own shovel an advantage, to dig 1,000 holes all over Tasmania!

Before that, however, Tim will be spending one week at Pelion (aided by Mrs Kingston) and one at Melaleuca (aided by assistant zoologist Louise McGowan) collecting earthworms under the Wilderness Environments Baseline Studies (WEBS) program.

Tasmanian Museum

The new Director of the Tasmanian Museum, indeed of "Tasmanian Museum Services", Pat

Sabine, takes up her position on 3 February. Ms Sabine has a background in arts administration. Invertebrate workers in Tasmania wait with great interest news of a replacement for Alison Green. I understand the position is currently "frozen" awaiting political developments.

Alison herself has been appointed an Honorary Research Associate of the Museum. We hope this doesn't mean she will be expected to continue to fill her former position in an unpaid capacity.

The State Government has made a special allocation of $60,000 towards the first stages of setting up a computerised database. It remains to be seen what priority is given to getting the zoology collection entered.

Department of Primary Industry

Lionel Hill informed me that he has been entertaining two Chinese Army worm specialists. After I had calmed down a bit he explained that "armyworm" is the name used by insect people for the larval stage of a moth (what an insulting misnomer!) and that they are not Oligochaete workers after all. Anyway, these (non-military) Chinese entomologists were visiting Tasmania as part of a National Study Tour.

DPI entomologists in Hobart were difficult to find. I make the assumption that no news is good news as far as a certain meeting in February is concerned, and that everything is (almost) under control. By the time this is circulated the meeting will have come and gone.

School of Agricultural Sciences, University of Tasmania

Robert Mensah completed his PhD in December.

Up to four postgraduate students will be joining the CRC Temperate Forestry Resource and Protection Program, of which two have already been selected.

Enggar Aprianto from Indonesia has commenced a Master's project under the AIDAB program, exploring the possibilities for integrated control of scale insects on *Boronia megastigma*.

Tim KINGSTON
Regional Councillor

Overseas News

Papua New Guinea

A Department of Agriculture and Livestock (DAL) team including Ray Kumar visited Wellington and Auckland in late October 1991 to develop protocols for the export of fresh pineapples to New Zealand. The visit was returned by the New Zealand side in late November 1991 and the delegation included Dr Ruth Frampton, the MAAF epidemiologist. A comprehensive protocol facilitating the export of pineapples to New Zealand from PNG has now been signed.

The Papua New Guinea Journal of Agriculture, Fisheries and Forestry has now been activated under the Editorship of Ray Kumar. The Journal would, among other things, publish research on all aspects of entomology. Further information about the Journal and submission of papers may be obtained from Mark Jeffery, Secretary to the Editorial Board, Publications Unit (AE & TD), Department of Agriculture and Livestock, PO Box 417, Konedobu, Papua New Guinea.

Mr Bob Prior has accepted a position with the Cocoa and Coffee Research Institute at Keravat after serving with DAL for about 15 years. Mr Prior will head the newly created entomology division at the institute.

Ray Kumar returned from his around the world recreation leave. Ray and family stopped in Honolulu to visit John Medler still working on the systematics of Flatidae. A visit was also paid to the fruit fly rearing laboratory at the Fruit and Vegetable Research Institute. In Great Britain some time was spent at the Natural History Museum, visiting old colleagues including Mike Webb, Bill Knight, Mrs J. Marshall, David Hollis, Roger Blackman, Jon Martin, Chris Lyal, Marry Bolton and several others. At the International Institute of Entomology discussions were held with Keith Harris, Mark Ritchie, Michael Wilson, Gary Stonedahl, Gillian Watson, Ian White and others. A visit was also paid to IIBC, Silwood Park and discussions held with Dr Jeff Waage and his staff.

Ray KUMAR
PNG Correspondent

New Zealand

Firstly, a vote of thanks and appreciation to Geoff Monteith for his capably edited newsletter - we enjoy reading it in New Zealand Geoff has done a great job over the years. My association as correspondent goes back to 1983 and I have enjoyed it. Entomologists in New Zealand wish Geoff all the best for the future and welcome Murray into what will be a very rewarding but difficult task.

As from 1 July, 1992 DSIR and MAFTech will cease to exist and the spoils will be divided up into various "Crown Research Institutes", hopefully (horse laugh) to herald a new era in science.

From the practical point of view it means entomologists will be split up. For instance, the Systematics Division of the DSIR will become part of the National Institute of Land Environment. Entomological staff in horticulture, both at DSIR and MAF, will go into the National Institute of Horticultural Production, while those working in veterinary or crop research will become part of the National Institute of Pastoral Research.

The Board members of these Institutes have been announced and, generally, scientists are happy with the choice of personnel; there seems to be a good balance of people with science and business backgrounds. However, the boards will be virtually autonomous and it remains to be seen how they will operate.

At this stage it is not known where the headquarters of any of the institutes will be, but I hope to be able to advise Australian readers in the next issue of *Myrmecia* of the new addresses and telephone numbers.

John TENQUIST
New Zealand Correspondent

News from Affiliated Societies

Entomological Society of Queensland

Professor Hugh Paterson addressed the General Meeting on 11 November with a talk entitled "The Recognition Concept of Species and Teaching Entomology". This talk was given just prior to Hugh's retirement.

The final Society gathering for 1991 was the annual barbecue held at QDPI Entomology Branch, Indooroopilly in December. This and the subsequent Notes and Exhibits meeting were attended by over 40 members and visitors. At the meeting six short addresses were given. Reiks van Klinken spoke on entomology on Macquarie Island; Neil Gough provided an account of IPM on ornamentals - the result of a study tour of Holland, UK and USA; Judith Melksham spoke on the larval stages of *Torymoides* sp., an ectoparasite of *Rhopalomyia californica*; Brenton Peters spoke on boron protection of softwood from termites; Tim Heard introduced the meeting to *Apion aculeatum*, a recent import to Australia for biological control of *Mimosa pigra*; and Bryan Cantrell gave some details about the Queensland Museum's display "Living with Insects - Friends and Foes".

The next meeting of the Society will be the Annual General Meeting to be held at the Queensland Museum on Monday, 9 March at 8.00 pm. Annual Reports for 1991 will be presented and the Council for 1992 elected. The main business will be the Presidential Address of the retiring President, Dr Robert Raven.

Christine NEALE
Representative Councillor

Entomological Society of NSW

The November meeting featured Prof. Gisli Gislarson currently spending six months with Richard Russell at Westmead Hospital's Medical Entomology Unit. Gisli gave an excellent talk on the ecology of insects in the River Laxa in Iceland, particularly the role of blackfly larvae in the ecology of trout.

Because of the level of understanding of the river's biology that Gisli and his team have been able to develop, it is now possible to predict the likely impact on the river of introduction of salmon into the upper reaches and of increasing tourism associated with trout fishing. This has major relevance to management of the river and its environs.

The Society planned a collecting weekend camping in Dharug National Park in December but impending bushfires forced NPWS to close the park for such activities. As this was planned as the Christmas function for the Society, Christmas has been postponed to early in the New Year.

The first meeting of 1992 was held on 12 February and gave Eberhard Schicha an opportunity to spruke on predatory mites in the SW Pacific region.

Graham BROWN
Representative Councillor

CONSERVATION COMMITTEE NEWS

We are getting our message across! I received a telephone call last week from a Janet Parker of the ABC who is working on a program to be broadcast on Saturday mornings, starting at the end of February, and to run for 52 weeks. It will be a combination of the current "Actualities" and "Earthworm". Janet is collecting material for a segment in the program called "A Natural History Event" and she asked for suggestions of "insect events" in any part of Australia which she could feature. We thought of cicada emergence, termite flights, sawfly aggregation, springtail scums (of course) and moth migration, among others. This is an opportunity, at a prime listening time, to show lay people that insects are interesting and not just to be swatted or stamped on. If anyone has any good ideas of this type of "event" that could be used in the program, please let me or Janet know. Her fax number is 02 3941414 and telephone 02 3941416.

The Statement on saproxylic (wood inhabiting) invertebrates has been static for a while, awaiting a publication from Europe, but now that has arrived, we hope to get it finished before the AGM in Hobart.

Otherwise, this quarter we have again been mainly occupied with the project to register invertebrate sites with the National Estate. Nine submissions are now complete and the Heritage Commission (AHC) are pleased and impressed with the standard we are presenting. From their content they are realising that the number of acceptable invertebrate sites is much larger than at first thought. As a result, the AHC are very keen to support further registrations.

The next inquiry of the Resource Assessment Commission is on coastal land use and possibly one after that on arid lands. This is good news. So far we believe the Commission have done a good job. At least our submission was extensively quoted in the draft Forests and Timber report! In that document RAC came to the conclusion that many of the Forest Industry's current problems are due to overcutting in the past, but the final report is yet to appear. The results of the Kakadu Inquiry are well known and RAC's low assessment of the economic value of the mine probably had some influence in the Government's decision not to allow it to proceed.

We prepared a submission on coastal environments last year for the House of Representatives Standing Committee on the Environment etc., but will need to expand and modify it according to RAC's term of reference. If anyone would like to help with this please contact me: Penelope Greenslade, C/o CSIRO Division of Entomology, GPO Box 1700, Canberra ACT 2601.

Penelope GREENSLADE
Convenor

REPORT ON THE EIA CONFERENCE "TOWARDS ENVIRONMENT 2001"

The Environment Institute of Australia (EIA) is a relatively new professional organisation for environmental practitioners, originating out of

Griffith University's Institute of Environmental Research in 1987. It has a very solid membership base (somewhere around 1500), but has failed to attract widespread support from ecologists and other academic environmentalists. The members are primarily public servants from government land management agencies, along with private consultants and industry representatives.

I have been a member of the Institute pretty much since its inception, but always with some detached scepticism. Was the Institute **really** concerned with the sound management of Australia's environment, or was it merely a cynical attempt to provide "professional" legitimacy to environmental rape and pillage? The EIA conference "Towards Environment 2001", held in Canberra last October, gave it an opportunity to show its true colours. I arrived at the conference sceptical, but left extremely impressed by the commitment to nature conservation shown by the delegates and by the members of the EIA Executive in particular.

The conference certainly attracted a cast of stars. It was opened by Minister Ros Kelly and included memorable guest appearances by Sir Ninian Stephen (Australia's Ambassador for the Environment), Dr Martin Holdgate (Director-General, IUCN), Dr Peter Ellyard (Chief Executive, Preferred Futures), Dr Brian Walker (Chief, CSIRO Division of Wildlife & Ecology) and Dr John Patterson (previously Director of Water Resources, now Community Services, Victoria).

The conference was organised around five sessions (marine resources, land degradation, biological diversity, waste management, and freshwater resources), each consisting of a set of presented papers followed by workshops, where delegates were divided into small groups to discuss issues arising from the papers. The papers were generally of a high standard (some were truly excellent), but I felt that the workshops suffered from a lack of focus. The conference concluded with a plenary session, where rapporteurs reported workshop deliberations, and recommendations were discussed. The mood of the conference was every bit as "green" as any other I had attended, including the recent Conservation Biology meeting in Brisbane.

Aside from the underlying mood, the conference was unlike any I had been to before. There were few academics, and just about everyone was wearing suits and ties (except for the women, who were indulging in their own form of power dressing). The venue was a plush hotel and the catering was gastronomically delightful but totally over-indulgent. The rather opulent ambience seemed rather contradictory for a conference on conservation (as one delegate quipped, the best contribution to conservation the conference could have made was not to have held the conference!). But then it occurred to me that this was the playing field of the power brokers of our society (many such people were indeed delegates), and that hypocrisy was never much of a concern in this arena. If you want to be of influence, then maybe you just have to play their game. The high morality of most academic ecologists has never got them far and, in fact, only seems to earn them distrust.

Since the Conservation Biology Conference, Australian ecologists have been discussing the need for a professional organisation which can effectively lobby the government over nature conservation issues. It looks as though there already is one! For those wanting more information about the EIA, its President is Mary Lou Morris, SA Department of Environment and Planning, GPO Box 667, Adelaide, SA 500.

Alan N. ANDERSEN
NT Member, Conservation Committee

AUSTRALIA'S BIOTA AND THE NATIONAL INTEREST - THE ROLE OF BIOLOGICAL COLLECTIONS

This Symposium was organised jointly by the Australian Institute of Biology and the Australian Academy of Science and was held at the Academy of Science in Canberra on 11-12 November 1991. It was attended by 135 scientists representing the Australian collections and other practising taxonomists, systematists and ecologists and was opened by the Hon. Ros Kelly, Minister for the Environment. The plenary papers and summaries of the five workshops will be published in *Australian Biologist* in March 1992. In the final session the recommendations from the workshops were discussed and the following conclusions and recommendations were agreed upon.

This Conference asserts that:

- Australia's biological collections are an essential part of the scientific resources of the Nation and should be recognised and supported accordingly
- the effectiveness of the collections depends upon their continued development, maintenance, research and interpretation
- maintenance of Australia's biodiversity demands the effective use of the expert knowledge of Australia's taxonomists and systematists

The Conference notes that:

- The collections and their users currently face several threats
- inadequate facilities for permanent storage in some collections and lack of funds for support of the basic infrastructure and maintenance needed by other collections
- inability to provide the infrastructure to support new technical developments, aushc as the long-term storage of genetic material
- massive backlogs in the important task of data-basing the collections
- in most cases, an absence of statutory protection
- rapidly diminishing expertise in taxonomy and systematics in the universities, who are charged with the training of new experts. The number of experts in systematics has declined from 193 in 1974 to 64 in 1991. There has been

a concomitant decline in the formal training of both undergraduates and postgraduates.

Accordingly, the Conference:

- acknowledges and acclaims the contribution of the Australian Biological Resources Study (ABRS) and the Environment Resource Information Network (ERIN) to the study, curation and databasing of Australia's biological collections, and recommends that this support should continue and expand
- welcomes the proposal to establish a Facilities Grants Scheme for the maintenance, curation and infrastructure of biological collections
- notes that the cost of restoring the infrastructures may be in the vicinity of $100 million over 10 years
- mandates a working party to investigate the conditions of existing collections and develop draft sets of minimum technical standards for their housing and conservation, to be referred to meetings of the Council of Heads of Australian Herbaria (CHAH), the Council of Australian Museum Directors (CAMD) and the Council of Heads of Australian Entomological Collections (CHAEC)
- recommends that the Department of Employment, Education and Training should allocate targeted funding for appointments of systematists in tertiary institutions, so as to restore and increase training in systematics at undergraduate and postgraduate level in each State and Territory of Australia
- recommends that postgraduate programs take greater advantage of the taxonomic expertise and collections in Herbaria, Museums and other agencies
- recommends that granting bodies give priority to funding postgraduate research in systematics
- recommends that vocational training courses in systematics and biodiversity at the Graduate Diploma level be set up.

The Conference recommends that:

- a formal network be established to facilitate planning and ensure the future of the biological collections
- the network should also include living and microbiological collections
- the network should be a coordinating Council for biological collections to advise the Minister responsible for the Australian biodiversity initiative
- the activities of ABRS, ERIN and the facilities grants scheme for biological collections should be closely coordinated in an administrative structure that reports to the Council
- at some future date the Council could also encompass the further function of funding research into processes, assemblages and changes in biodiversity

C.H TINDALE-BISCOE
Chairman
Conference Organising Committee

3RD MEETING OF THE COUNCIL OF HEADS OF AUSTRALIAN ENTOMOLOGICAL COLLECTIONS

The third meeting of the Council of Heads of Australian Entomological Collections was held at

Enjoying a well earned break during the 3rd Annual Meeting of CHAEC in Hobart (L to R): Murray Fletcher, Max Moulds, John Jennings, Peter McQuillan, Alan Yen, Ebbe Nielsen, Margaret Schneider, Bob Eldridge, Woody Horning, Dick Bashford, Jean Just and Phil Andrews.

the University of Tasmania immediately preceding the 23rd AES Conference. The meeting was attended by representatives of 13 institutions holding major entomological collections in Australia plus observers.

The meeting was chaired by Peter McQuillan and covered the following agenda

1. Welcome to members and observers
2. Apologies
3. Discussion of agenda and additional items
4. Minutes of Second Annual Meeting
5. Operations of the Council
   -- Report of the Treasurer
   -- Adoption of guidelines
6. Reports of Committees
   -- Databasing
   -- Legislative Protection
7. Reports from member Collections
8. Tasmanian Curators Group
9. Australian Biological Resources Study
10. Council of Aust. Museum Directors
11. Report on A.A.S./A.I.B. Collections Meeting
12. Databases
    -- Entomological standards document
13. Review updates
    -- Museums
    -- ABRS
14. Proposed curatorial workshop
    -- other workshops
15. Funding issues
    -- Base funds
    -- Fees for service
16. CRC proposal for Insect Systematics
17. Other business
    -- Export permits
    -- Long term loans
    -- Other
18. Next meeting of Council and Chairperson

Coming Events

TECHNICAL TRAINING COURSE

At the suggestion of the Council of Heads of Australian Entomological Collections (CHAEC), the Australian National Insect Collection (ANIC) has offered to conduct regular technical training courses for entomological technicians working with research collections of insects and related organisms or specimens for taxonomic study and identification. The first of these courses will be held from 14-18 September 1992 incl. The course will cover all aspects of entomological techniques including collecting specimens, pinning, preparation, labelling, storing and curation. The course, organised by the ANIC Collection Manager, Dr Geoff Clarke and Mr Murray Upton, will draw upon the expertise of ANIC staff for teaching and demonstration. The course, limited to 15 participants, will cost $170.00 per person plus accommodation. All interested persons should contact Geoff Clarke, ph (06) 246 4036, fax (06) 246 4000, no later than 30 April 1992 to register. Moderately priced accommodation can be arranged at the participant's request.

6th International Working Conference on Stored-product Protection
National Convention Centre, Canberra, Australia, 17-23 April 1994

Under the auspices of the Australian Centre for International Agricultural Research (ACIAR), CSIRO and the Australian grain-handling industry, the 6th International Working Conference on Stored-product Protection will be held at the National Convention Centre, Canberra, Australia from 17-23 April 1994. Intending participants, and those otherwise interested in receiving future notices on the conference are invited to register preliminary interest by completing and returning the registration form available from **Capital Conferences Pty Ltd, PO Box E345, Queen Victoria Terrace, Canberra ACT 2600, Australia**, ph (06) 285 2048, fax (06) 285 2086

The International Working Conferences on Stored-product Protection are the premier series of international meetings reporting on current research and development on the preservation of stored durable commodities, including cereal grains, legumes and root crops. The selection of Australia as the venue for the 6th IWCSPP acknowledges its international reputation as an exporter of high quality grain and, through industry and government supported research and development, as a major contributor to new postharvest technology.

A comprehensive program of technical seminars for the meeting is being drawn up by an Organising Committee widely representative of the Australian grain handling and storage industry, and the postharvest research and development community. Stored-products protection in the Tropics will be a major theme.

Information on the Scientific Program is available from Dr B.R. Champ, c/- ACIAR, GPO Box 1571, Canberra, ACT 2601, ph (06) 248 8588, fax (06) 257 3051.

New Publications

Insect Pests of Fruit and Vegetables

edited by G. Swaine, D.A. Ironside and R.J. Corcoran. Information Series Q191018, Queensland Department of Primary Industries, Brisbane. 1991. $33.

This is the second edition of the 1985 publication - **Insect Pests of Fruit and Vegetables in Colour**: compiled by G. Swaine, D.A. Ironside and W.H.T. Yarrow. Improvements noted are replacement of the unnumbered, loose-leaf format of the first edition by a paginated bound volume, inclusion of indexes to the crops and to the pests and their natural enemies, and deletion of the section on the current recommendations for control. Much of the control information was already given in the text and the removal of specific insecticidal treatments will prolong the useful life of the book.

The book does, however, have several deficiencies given that its primary function is advisory. A major criticism is the failure of the editors to heed the suggestion of the reviewer of the original publication (*J. Aust. ent. Soc.*, 1986, 25: 102) that it should have also contained the sections on onions, potatoes, pumpkins and sweet potatoes which had been included in the companion volume - **Insect Pests of Field Crops in Colour**: compiled by G. Swaine and D.A. Ironside. Information Series Q183006, Queensland Department of Primary Industries, Brisbane. 1983. Other criticisms are:

.the failure to update the approved scientific names for budworm caterpillars, corn earworm, native budworm, vegetable weevil and yellow-peach moth, and

.the continued inclusion of photographs of the adults of the cabbage white butterfly, cluster caterpillar, corn earworm, grapevine moth, macadamia nut borer and mango seed weevil - and of the moth and pupa of the cabbage moth.

One aim of the book as stated in the Introduction being to "show the destructive stage of the pest; for example, the caterpillar that feeds on the crop rather than the moth that does not cause damage".

These shortcomings not withstanding, the book should be very well received by persons engaged in horticultural agricultural and agricultural extension who did not manage to acquire a copy of the first edition.

G.J. GOODYER
BCRI Rydalmere

Biological Control of Weeds, a handbook for practitioners and students by K.L.S. Harley and I.W. Forno.

Inkata Press 240mm x 170mm, 88 pages, limp, colour and black & white photographs and line drawings, 1992, ISBN 0909605 742. Normal retail $39.95 **SPECIAL OFFER TO AES MEMBERS $24.00 + $2.00 postage within Australia.**

Australia is recognised as an international leader in biological control of weeds. This handbook is the first concise authoritative book about the background and procedures involved in this increasingly important method of weed control. Information on all aspects of biological control of weeds are drawn together in this book. It is a useful text, guide and reference source and will be invaluable for students, to scientists embarking on a biological control project for the first time, to those already experienced in the field, and to persons interested in preserving the natural environment through the use of environmentally friendly methods of weed control. The authors are both experts in this field having led many successful projects directed at control of terrestrial weeds and several floating aquatic weeds.

Special Members Discount orders should be sent to: Ken Harley, Division of Entomology, CSIRO, PMB No.3, Indooroopilly, Q. 4068. (Cheques in favour of "K.L.S. Harley" with orders).

Insect and Allied Pests of Extensive Farming. Dept of Agriculture Western Australia, Plant Protection Society of WA. Bulletin 4185, ISBN 0 7309 3891 3.

This book, aimed at broad acre farming will help farmers to identify insects and the damage they cause. Pests of cereals, fodder crops, trees and pastures are included.

It gives a good description of the insect along with coloured photographs showing the main features of the pest at various stages of their life cycle and the damage they cause. This combines to provide a useful guide to identification.

This is a book that will provide a reliable source of information for many years without the need for regular updating. It is recommended to those who need a quick reference to the identification of insects on and around their farms.

In addition to descriptive information, details are provided on the basic biology of insects and their benefits to the man on the land. Simple keys are provided in non-technical language that make the task of identification easy.

Available from: The Secretary, Plant Protection Society of WA, PO Box 190 Victoria Park, WA 6100.

Price: $5.00 plus $2.50 postage and handling. Bulk orders (10 or more copies) will be sent at the same price post free.

Call for Papers

PAPUA NEW GUINEA JOURNAL OF AGRICULTURE, FORESTRY AND FISHERIES.

The Journal started life as the New Guinea Agricultural Gazette in 1935. Since then it has undergone several name changes but, apart from the war years, has been published continuously up to the present day. In December 1991 a new Editor - In - Chief was appointed along with a new Editorial Advisory Board. The new Editor - in - Chief, **Professor Ray Kumar**, is now calling for papers for Volume 36 to be published in 1992.

The Journal deals with all aspects of scientific research in tropical agriculture, forestry and fisheries with an emphasis on Melanesia and the South Pacific. The Journal also welcomes papers that deal with the interface of the natural and social sciences in the major areas of concern. The Journal is intended to be multi- and inter-disciplinary in nature and, as well as research papers, will accept review articles. Notes, bibliographies and book reviews are also acceptable. Intending authors should consult "Instructions for Contributors" available from Publications Section, DAL for information about house style.

Please send all contributions to:

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Attention: Senior Publications Officer
P.O. Box 417
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SPECIAL SALE OFFER ON BACK ISSUES OF *MYRMECIA*

The Society holds considerable stock of back issues of its News Bulletin, dating right back to the first issue in November 1965. Though these are available for sale to members this has been little advertised. The stock is presently stored in Brisbane (Geoff Monteith's garage!) and will soon be transferred to Sydney.

To reduce the volume of back stock before transfer a one-off discount offer on back issues is now available. Society Executive has agreed to a sale rate of 25c per copy, only one eighth the current cover price! Please write to Geoff Monteith (Queensland Museum, PO Box 300, South Brisbane, Q 4101) now if you want any copies. You may request individual copies (named by either volume and part number or by month of issue) or you may request a block of issues e.g. "all issues for 1972 and 1973". It would be acceptable for a library to purchase a "full set" at this price rate while the offer lasts. A complete set is no longer available, the following issues being currently exhausted: 6(1), 8(1), 10(1), 13(4), 18(3), 19(1), 19(2), 19(4), 20(1), 20(2), 23(2).

You will be charged surface mail postage on your order. NB: SEND NO MONEY NOW! Geoff will bill you the cost of Bulletins and postage at the time they are dispatched. **OFFER CLOSES END OF APRIL 1992.**

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